

THE CONTRACT JOURNAL

INCORPORATING

THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

No. 4,297 83rd YEAR

THURSDAY, NOVEMBER 2, 1961

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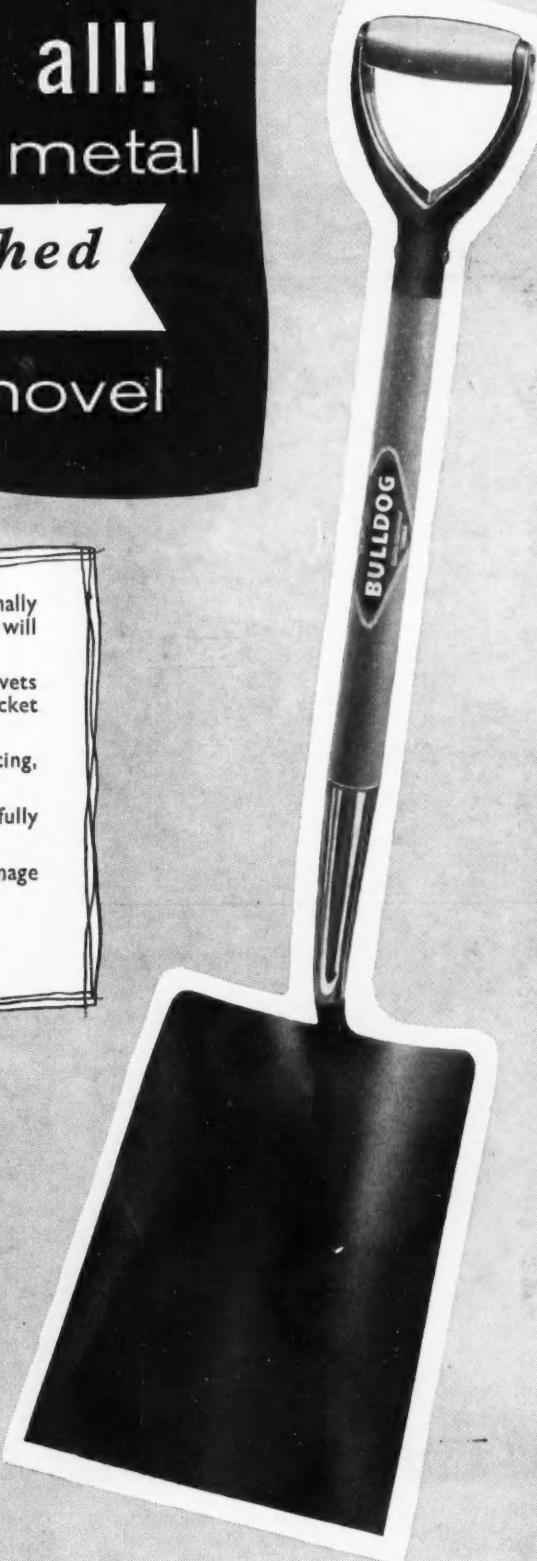
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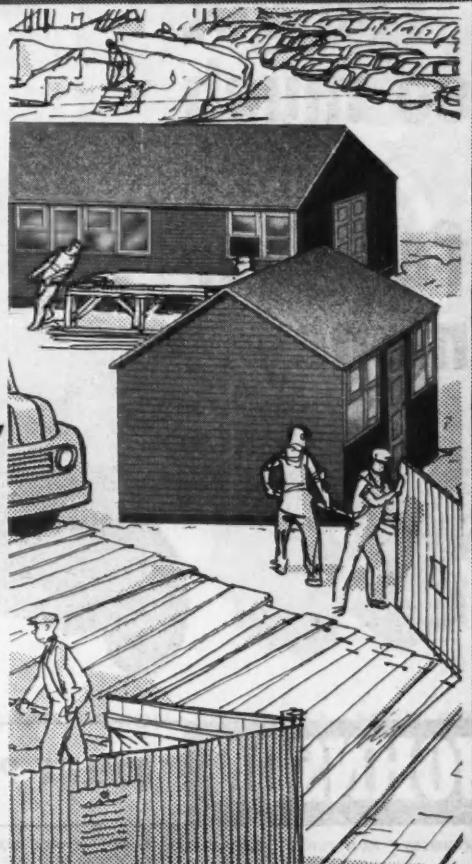
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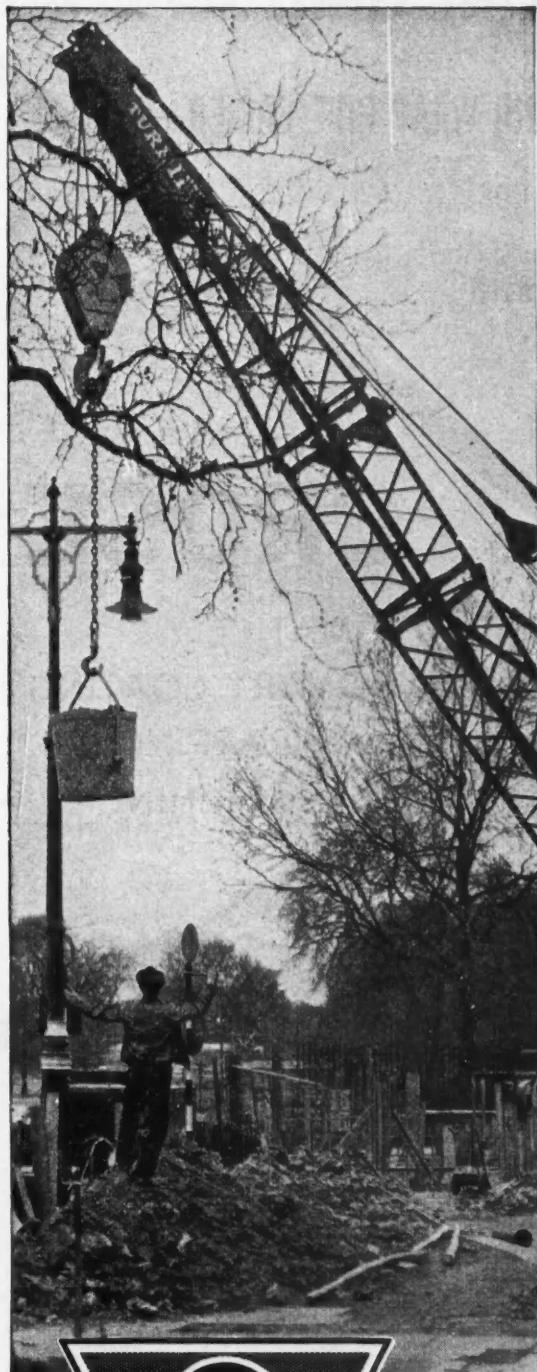
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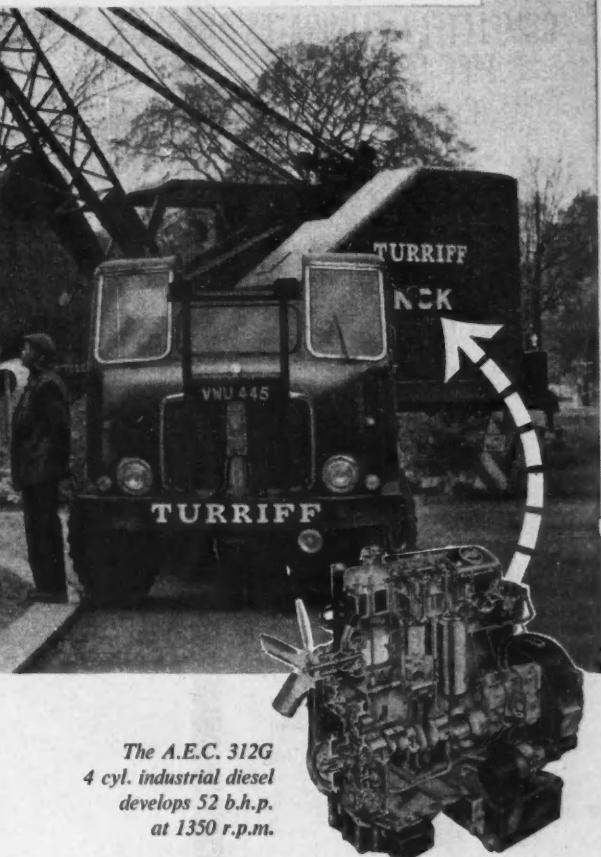
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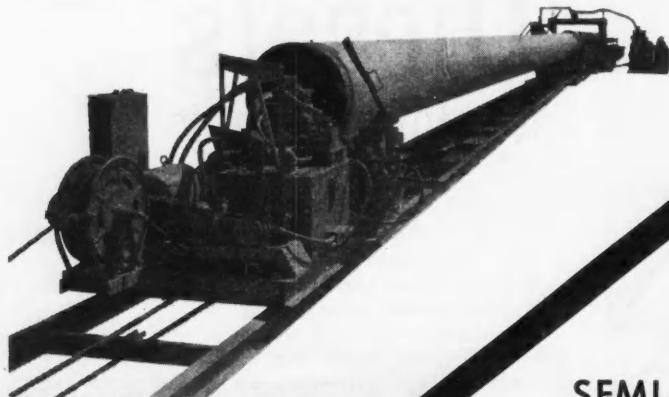
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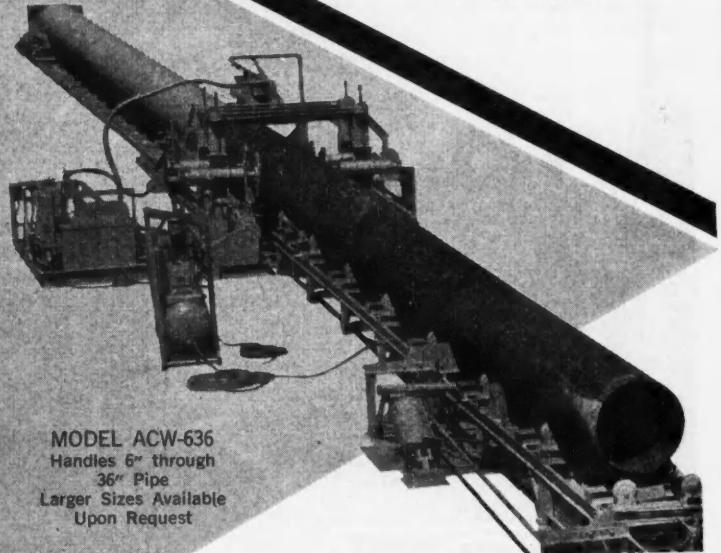
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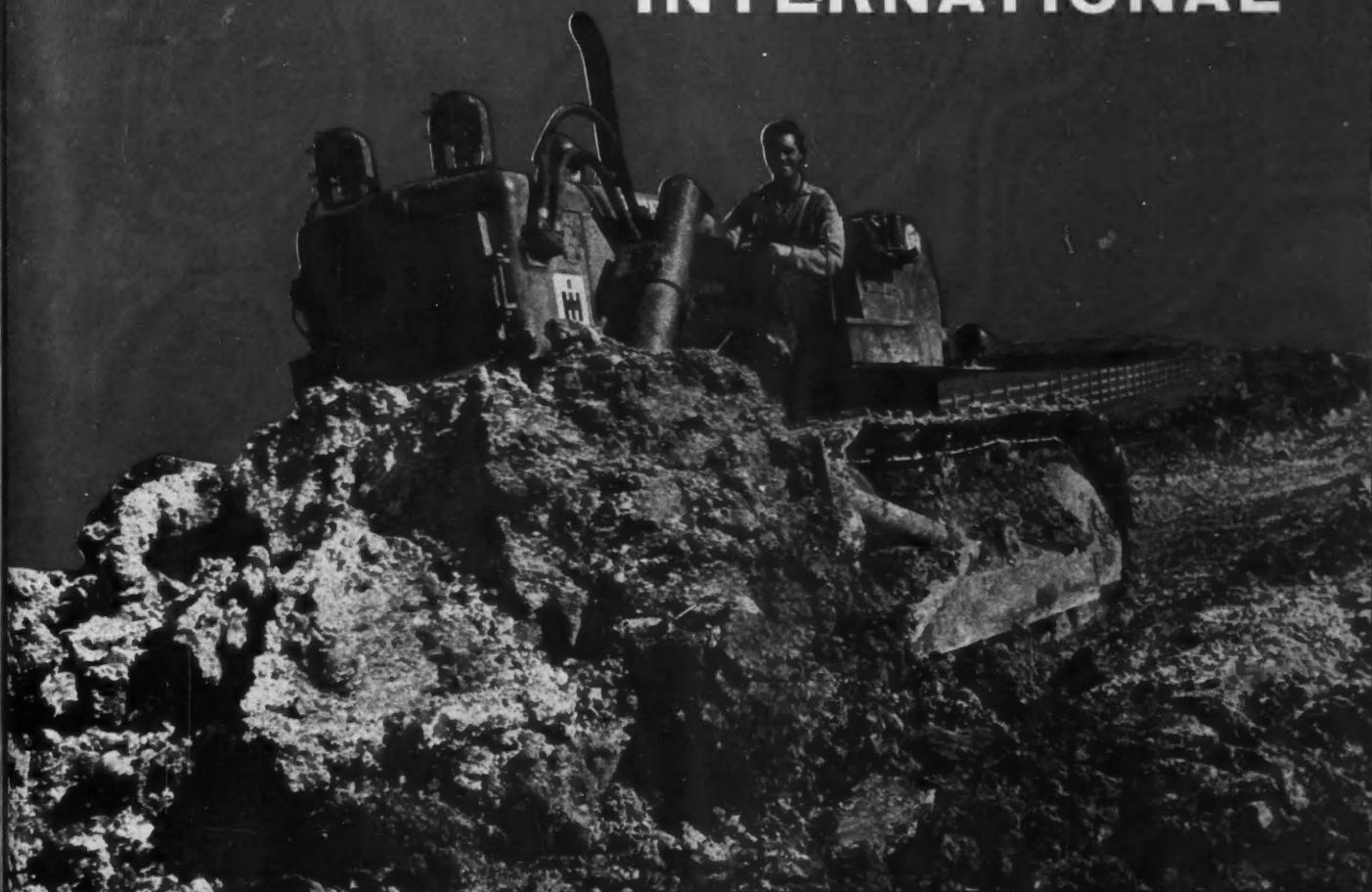
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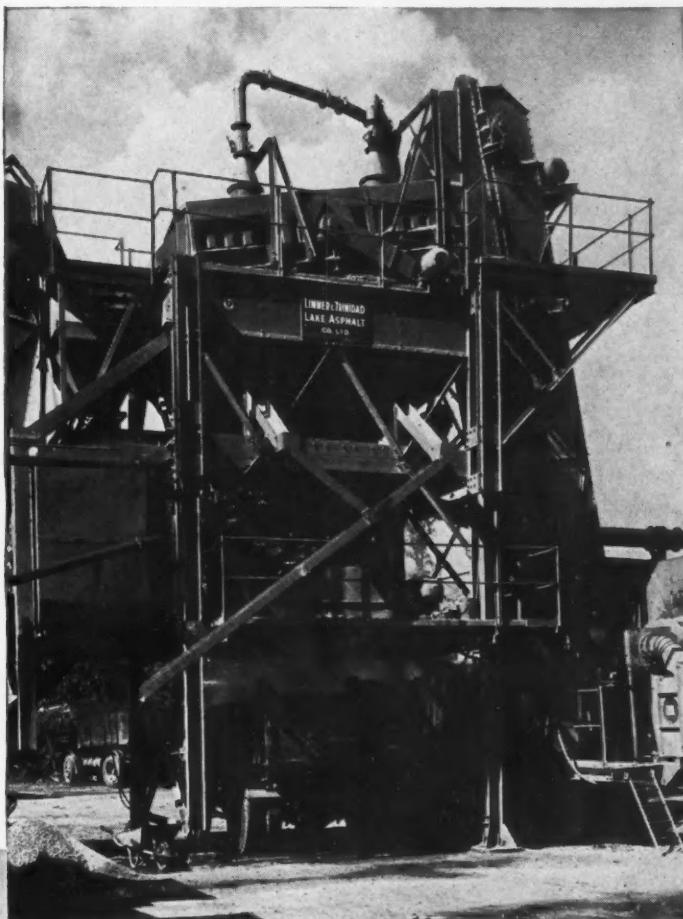
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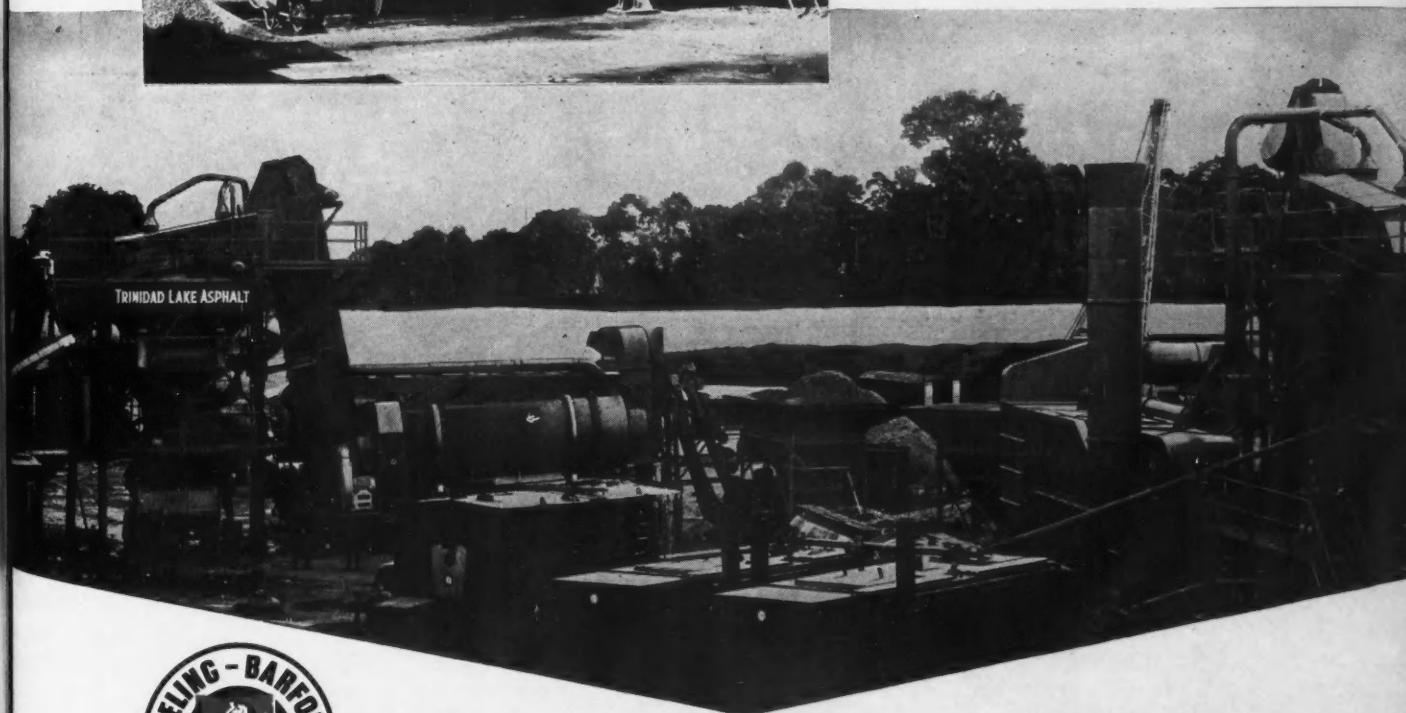
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Limmer & Trinidad Lake Asphalt Co. Ltd. now have seven Goodwin 60/90 Asphalt Plants.

*Photographs by courtesy of
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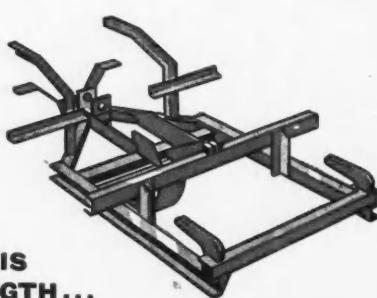
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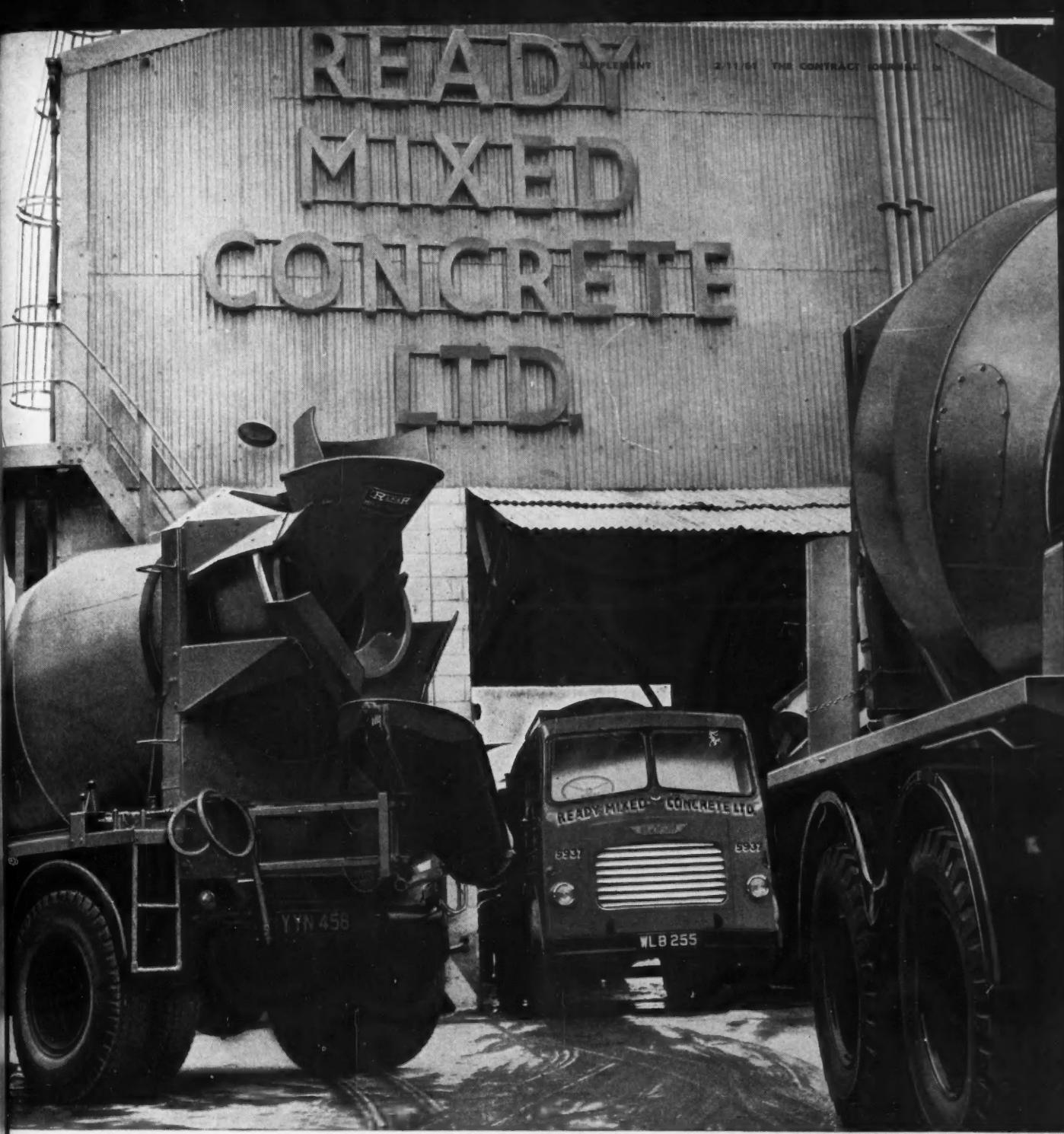
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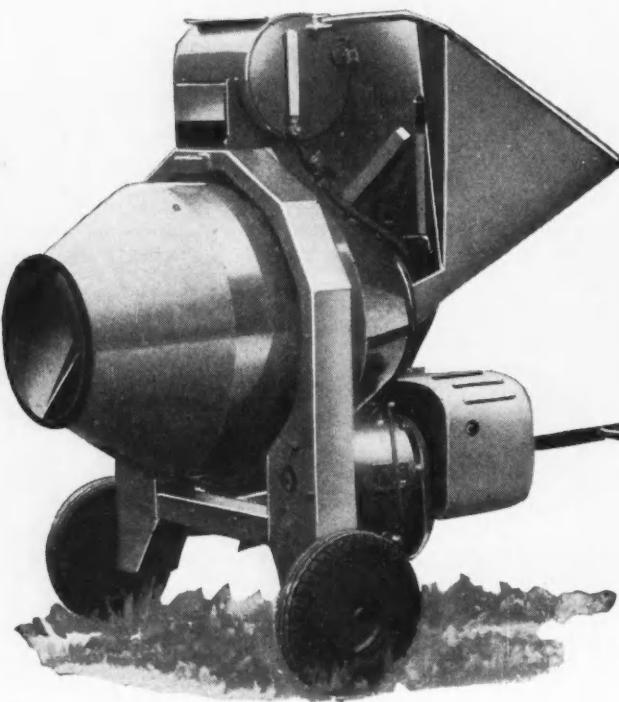
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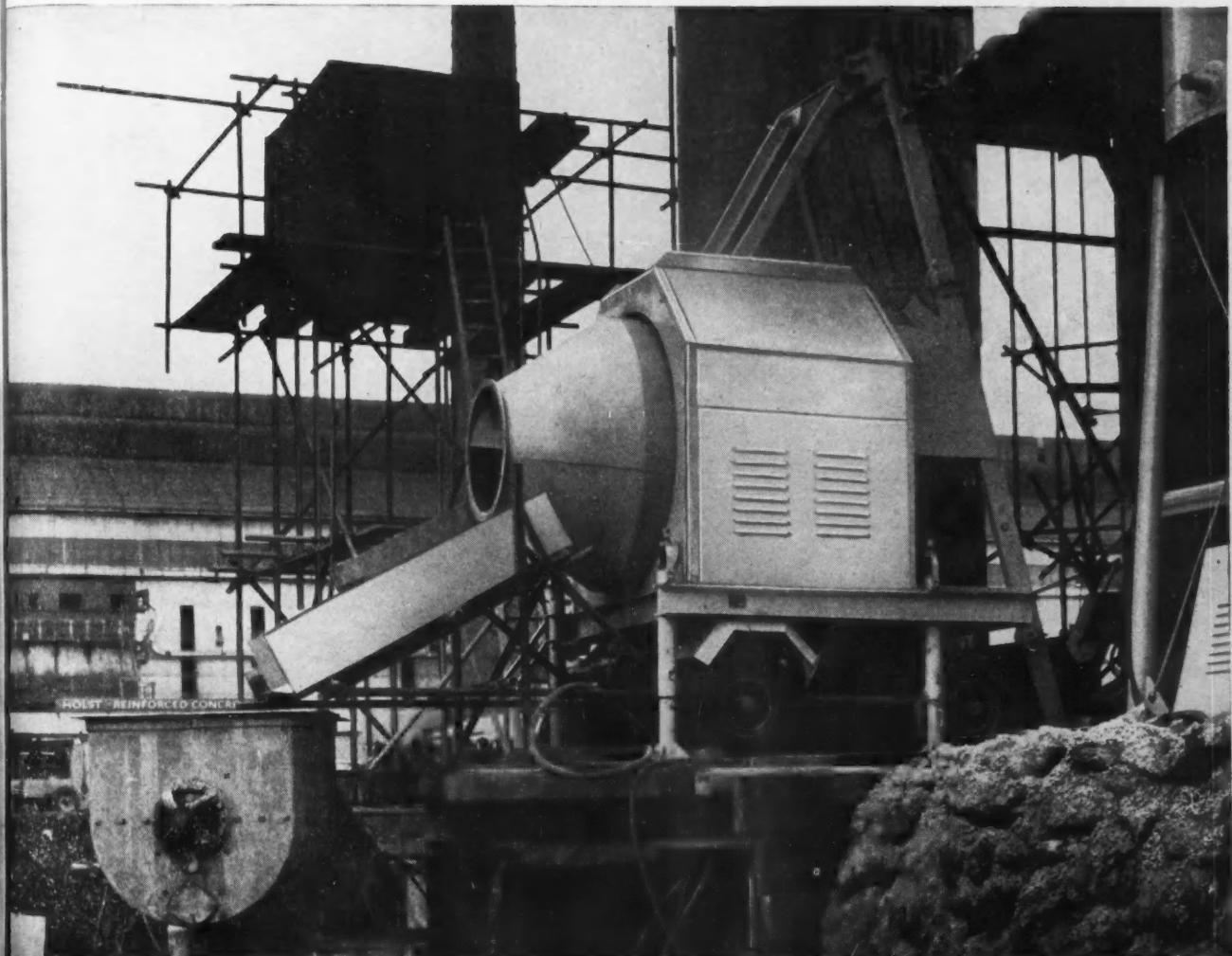


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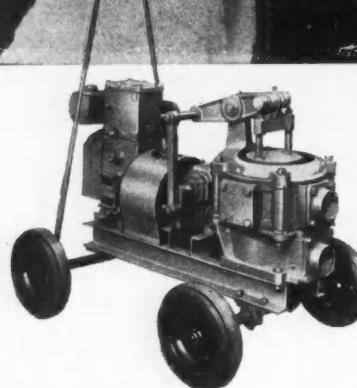
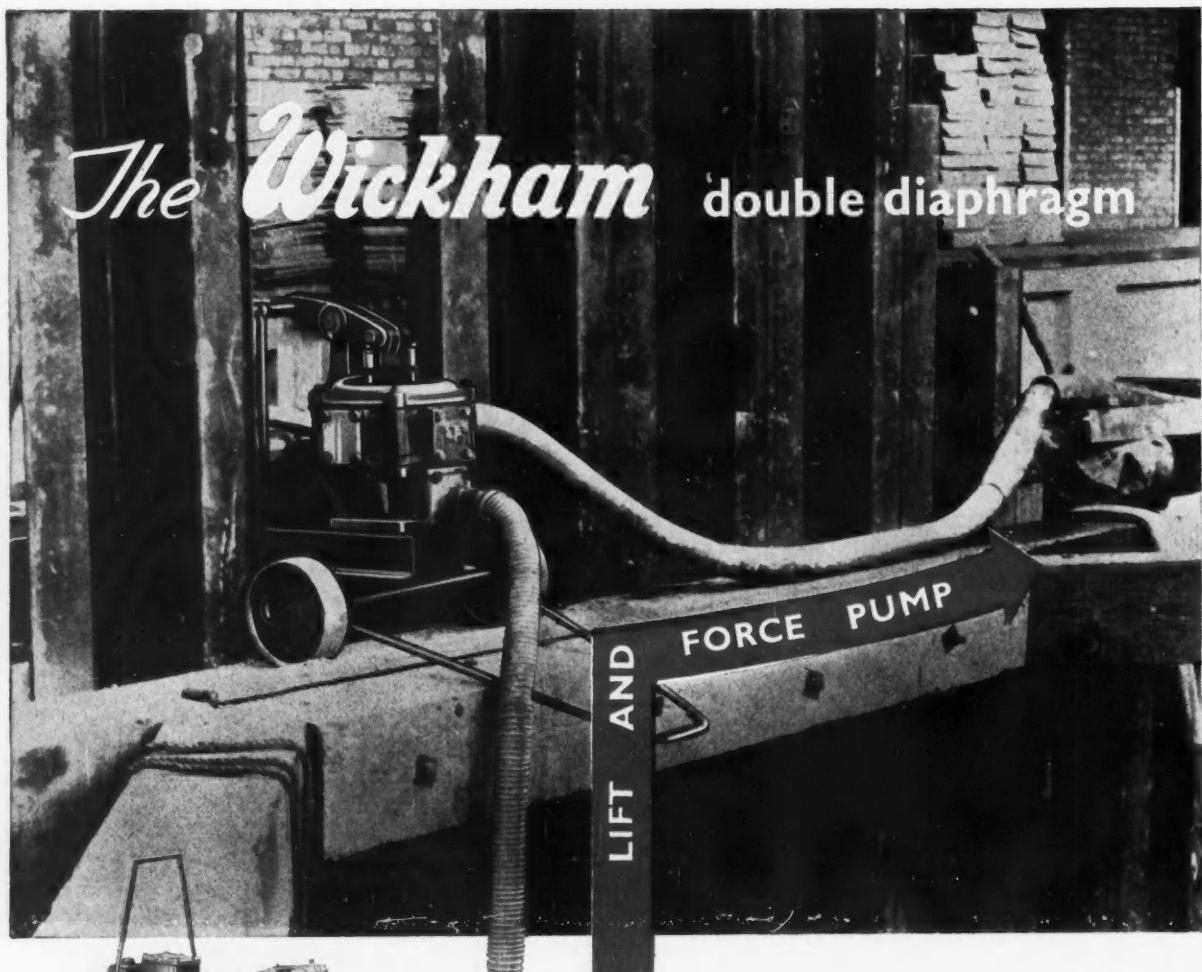
*Photograph by courtesy of Appleby-Frodingham Steel Company
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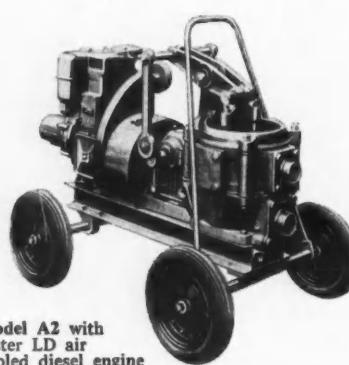
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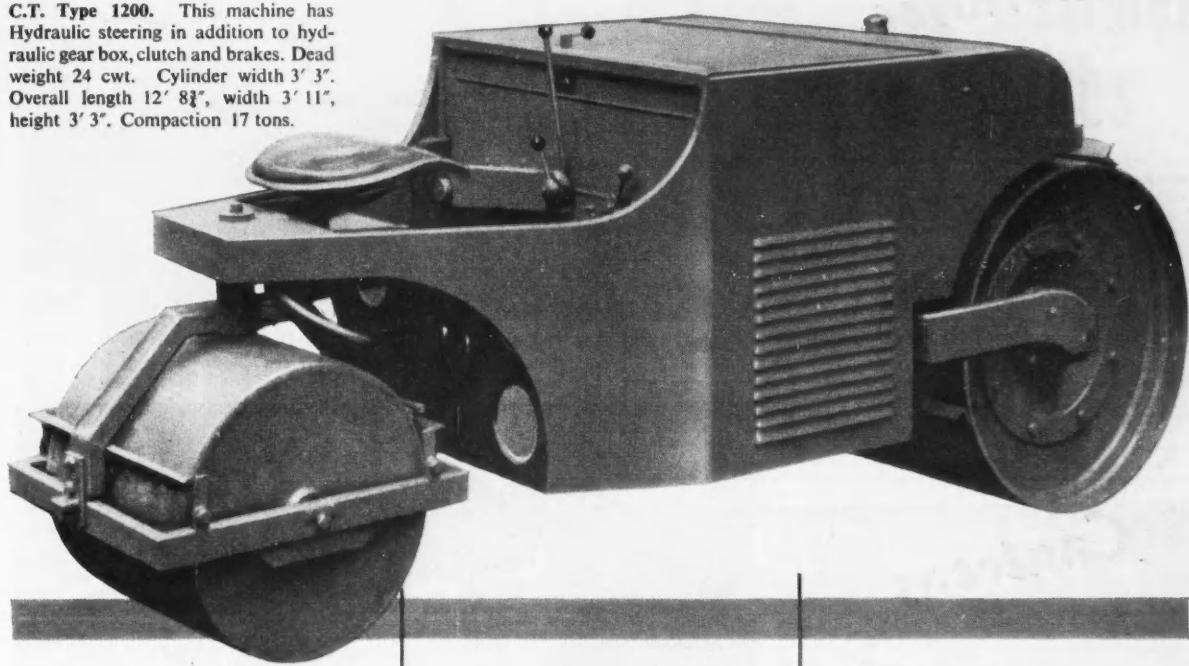
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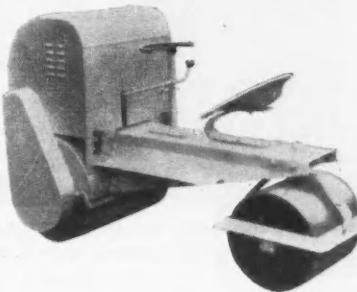
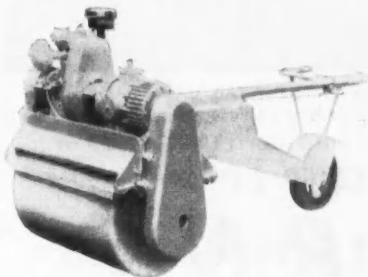
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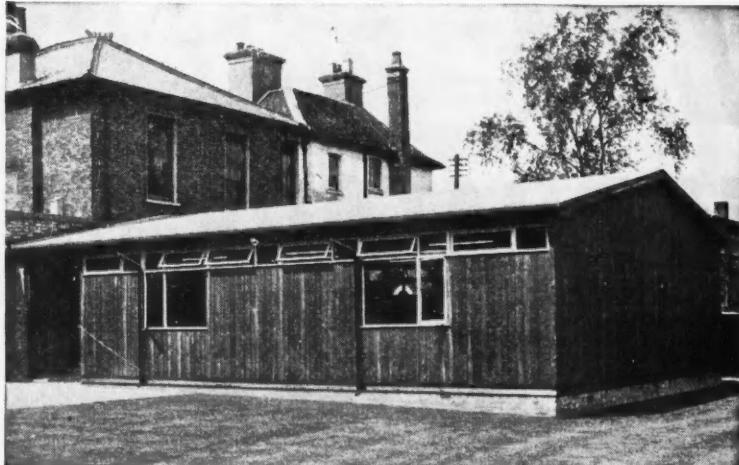
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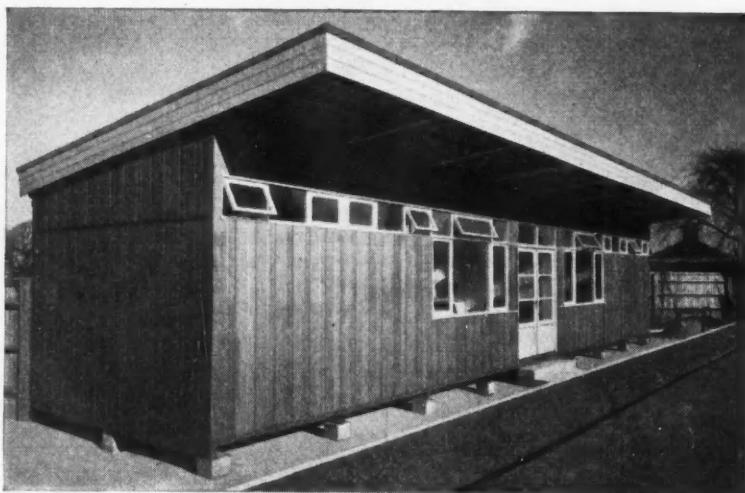
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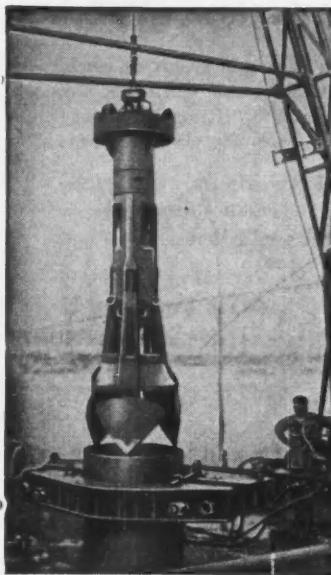
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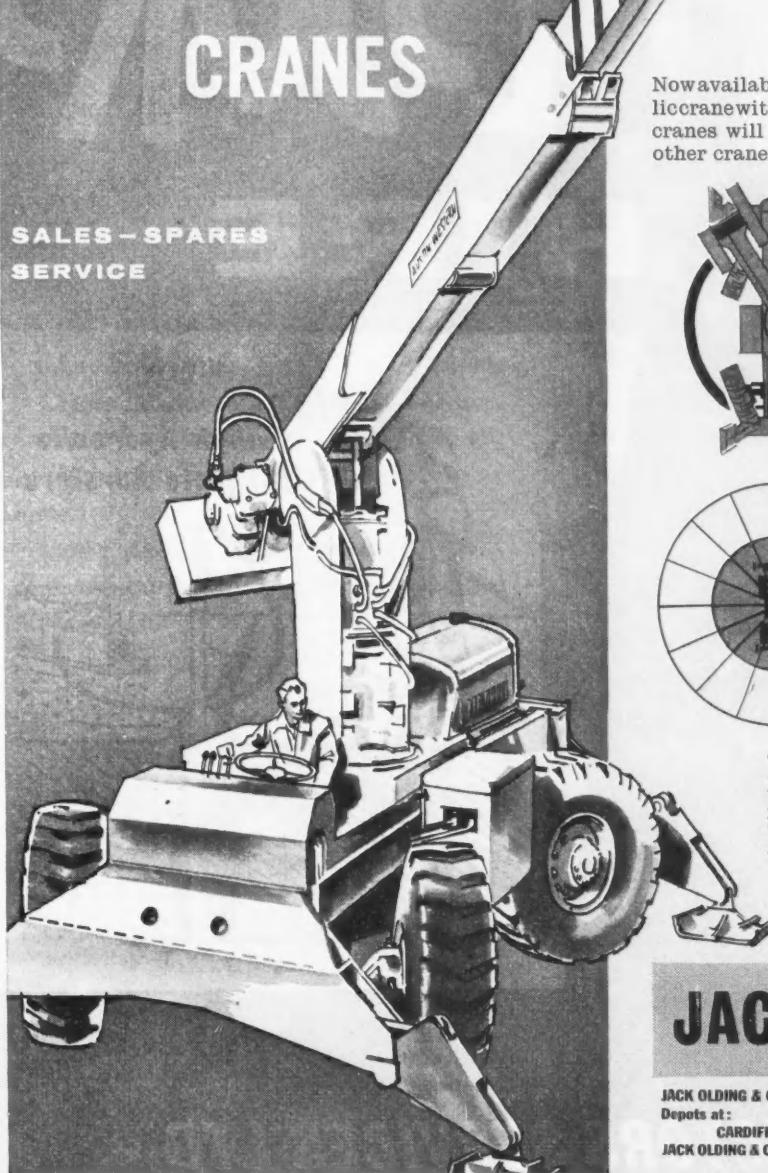
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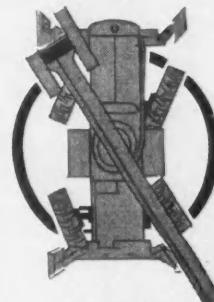
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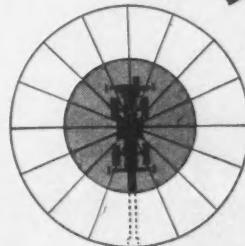
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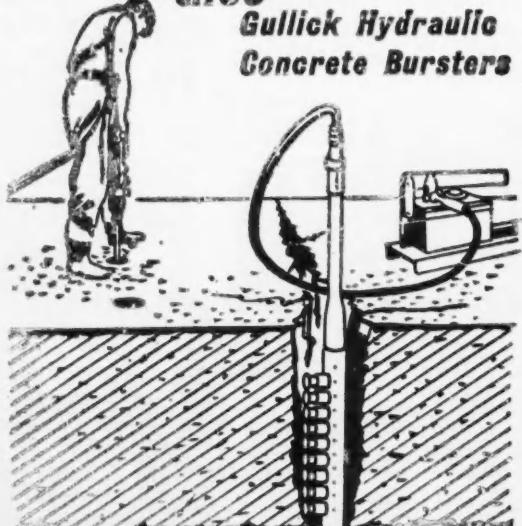
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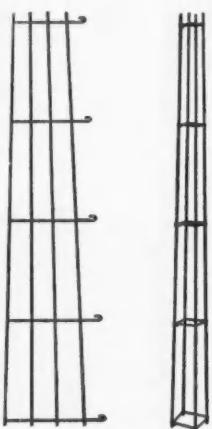


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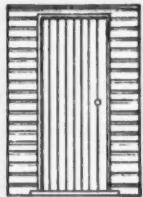
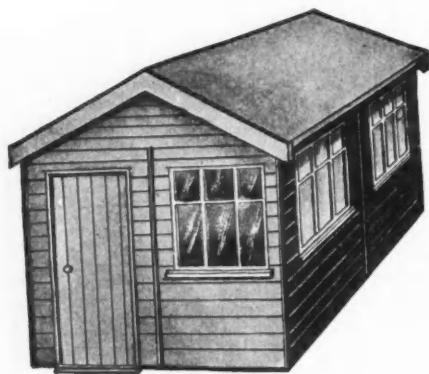
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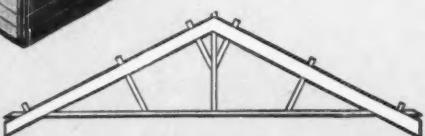
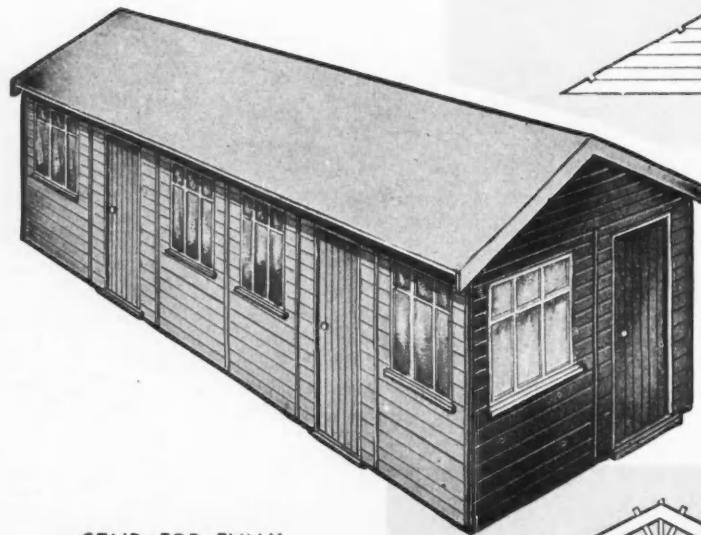
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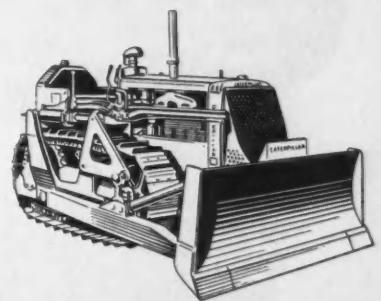
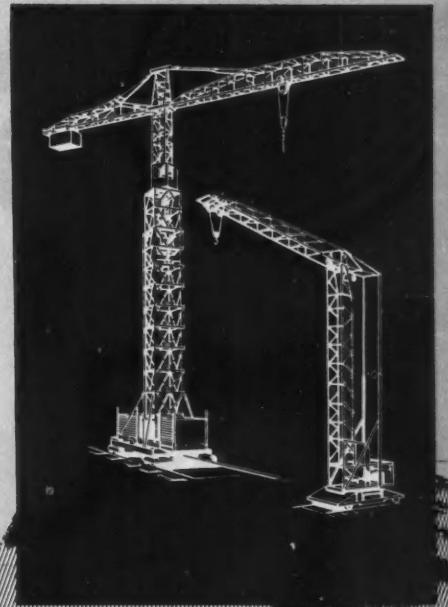
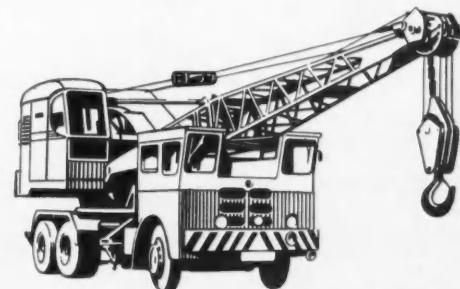
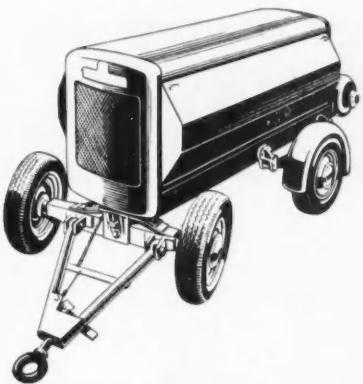
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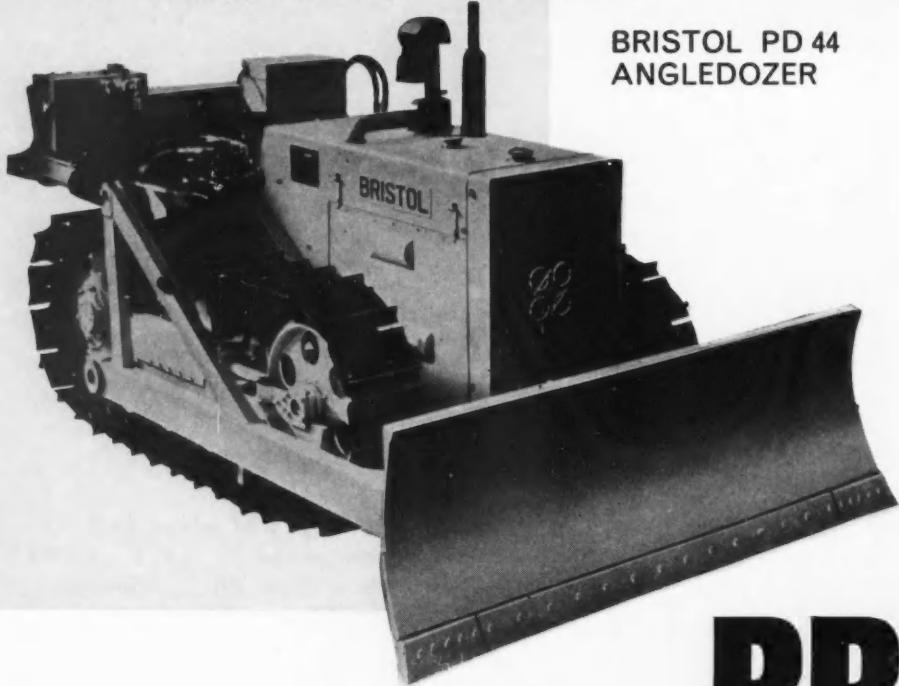
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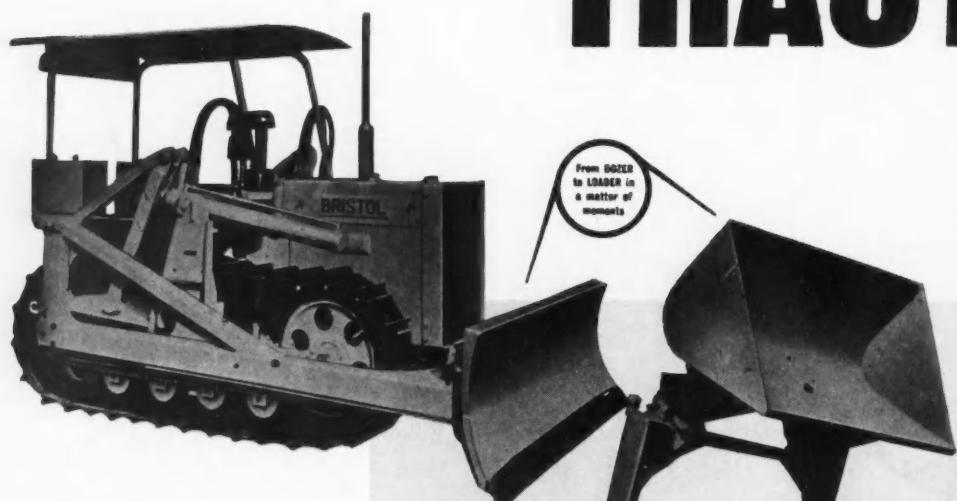
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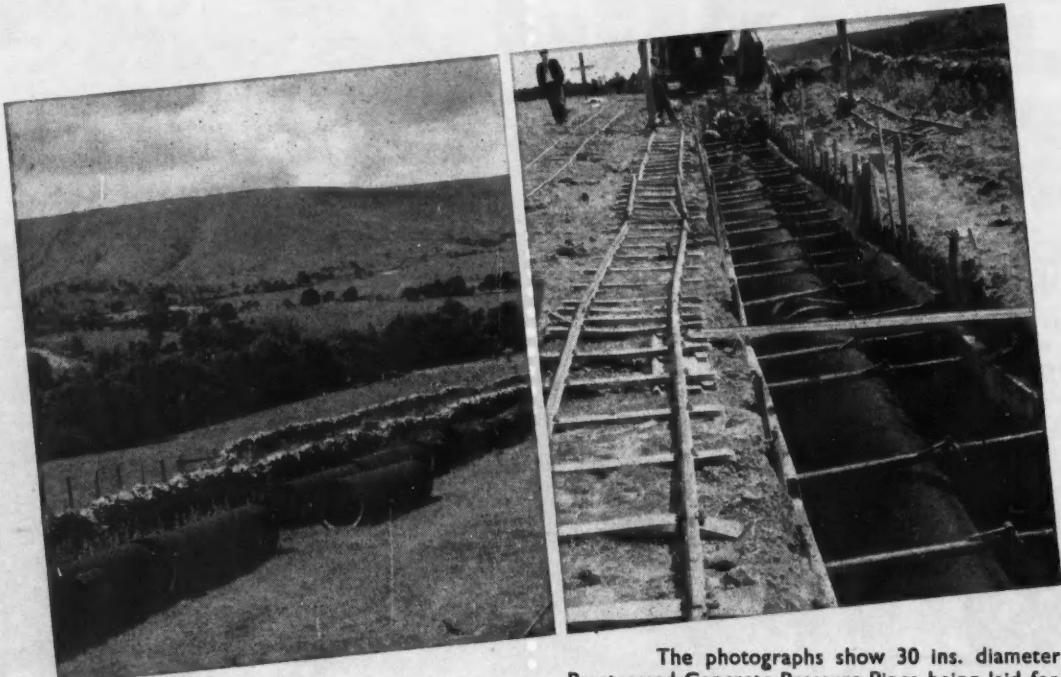
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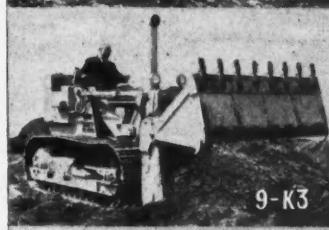
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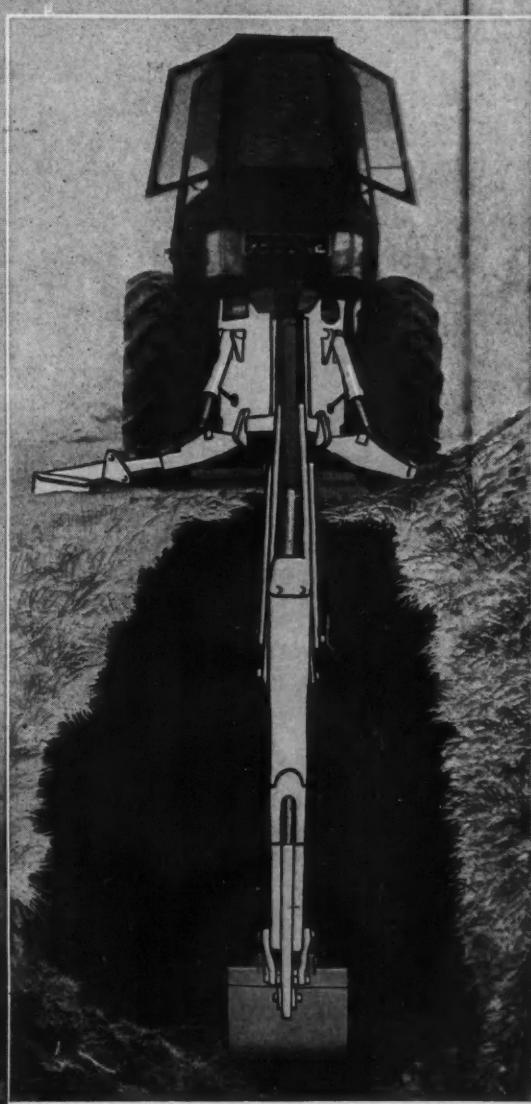
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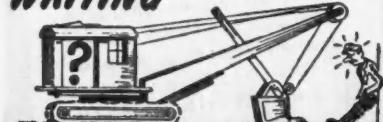
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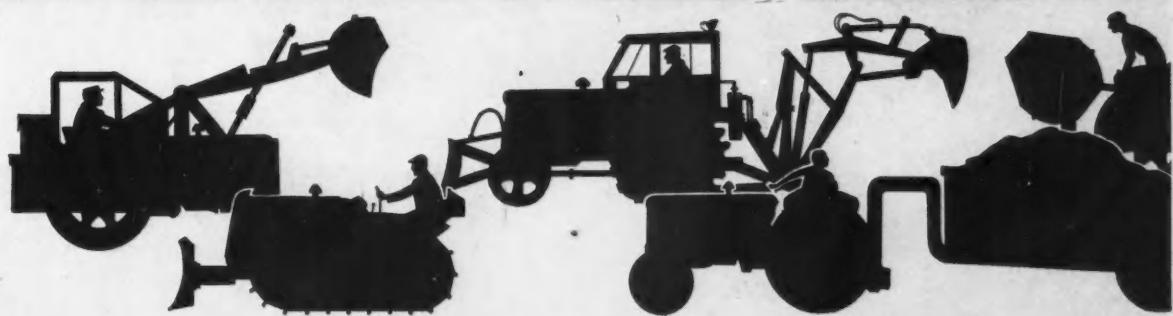
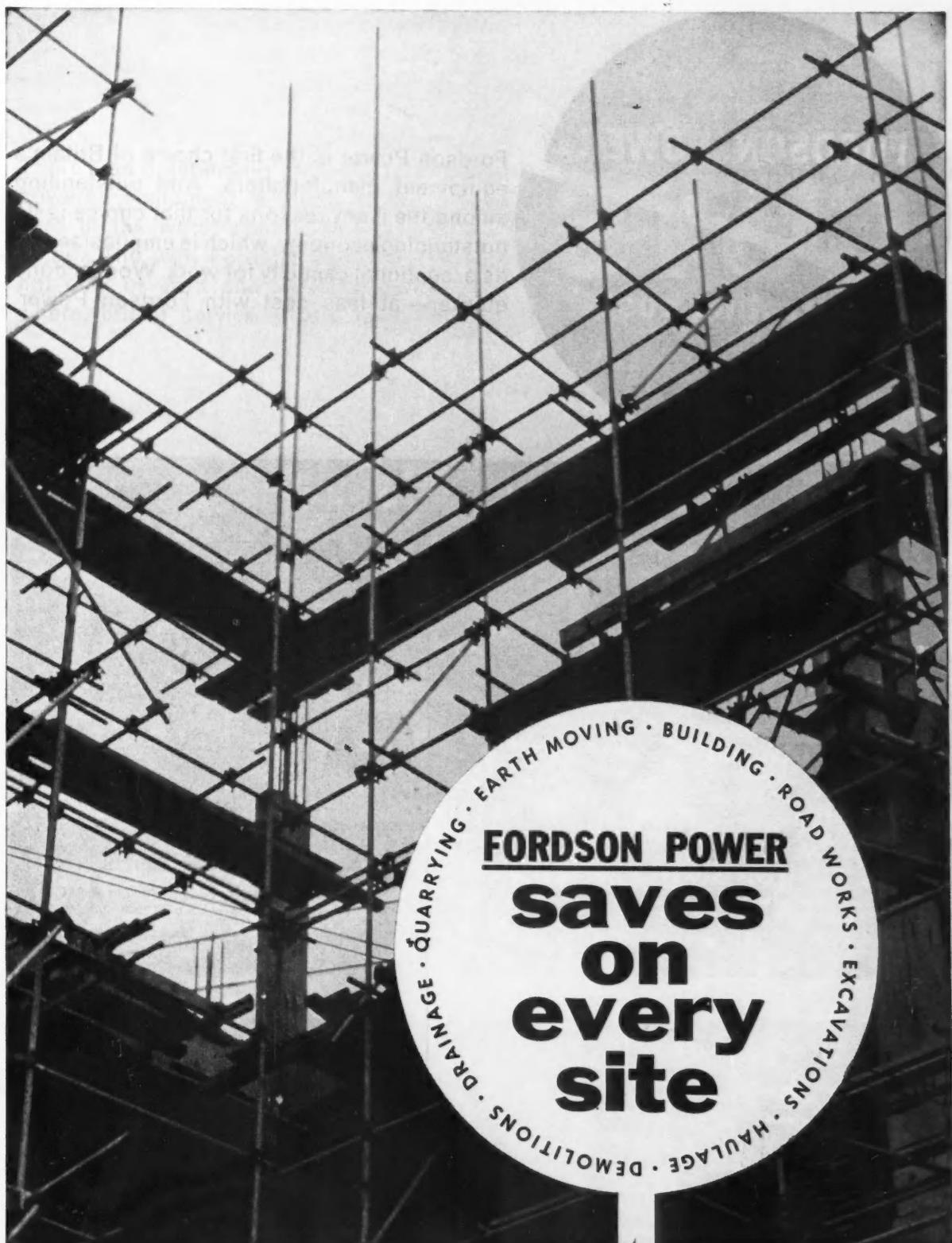
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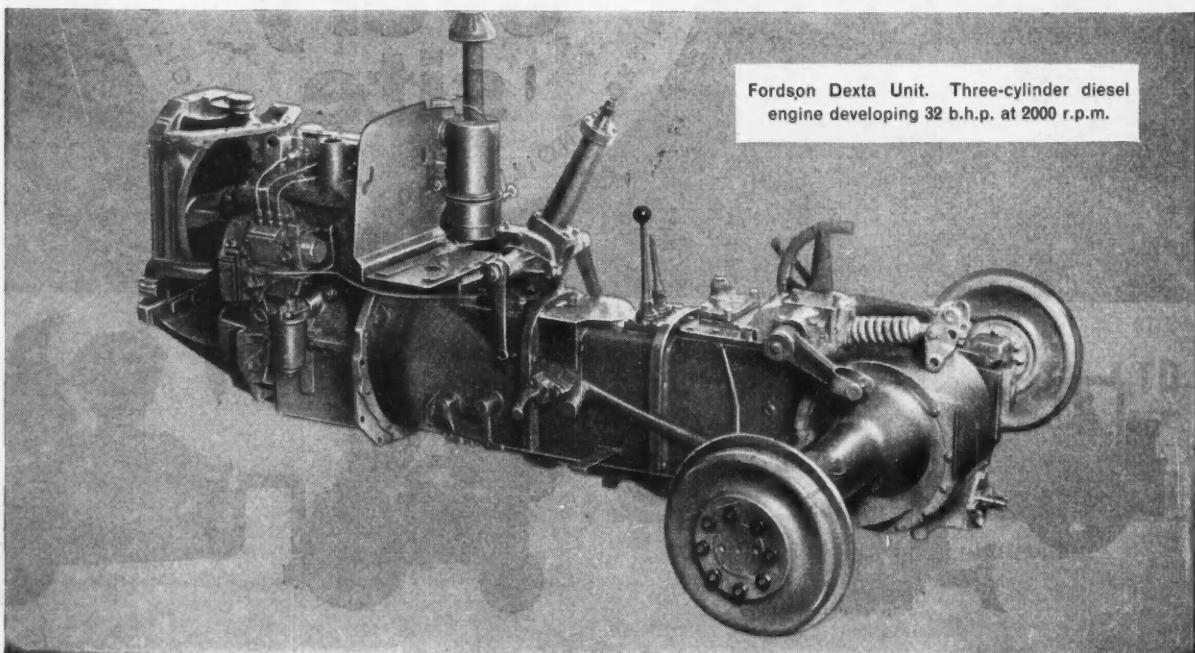
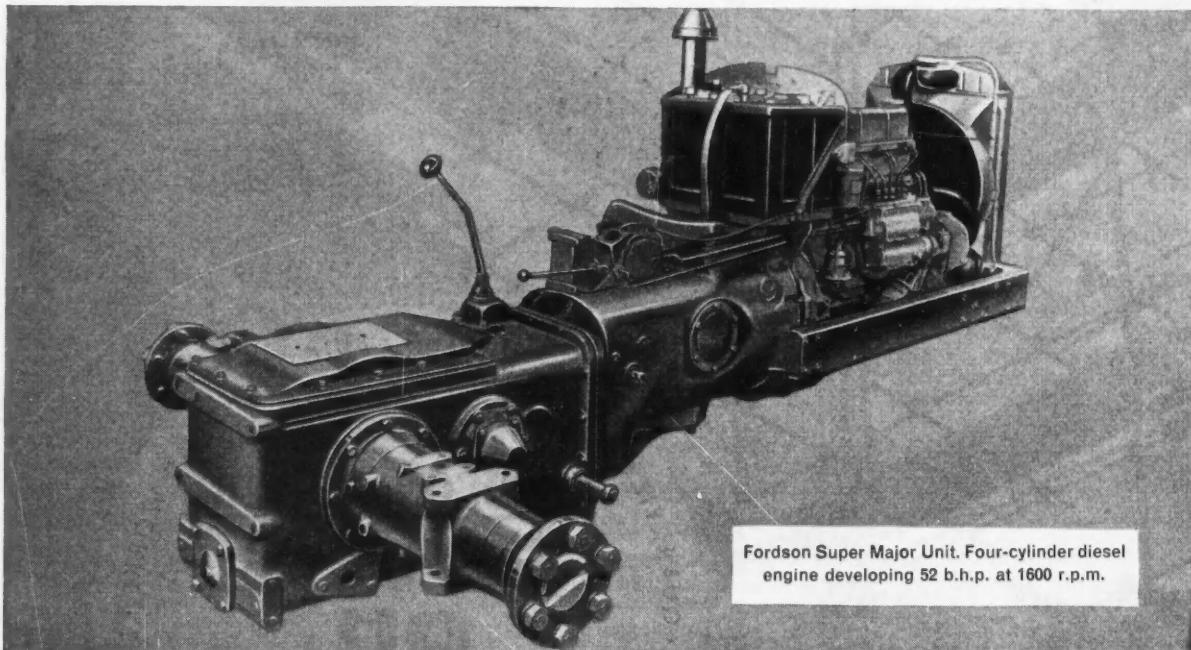


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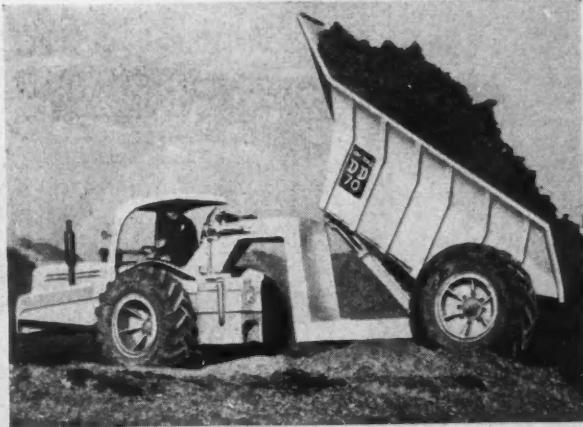
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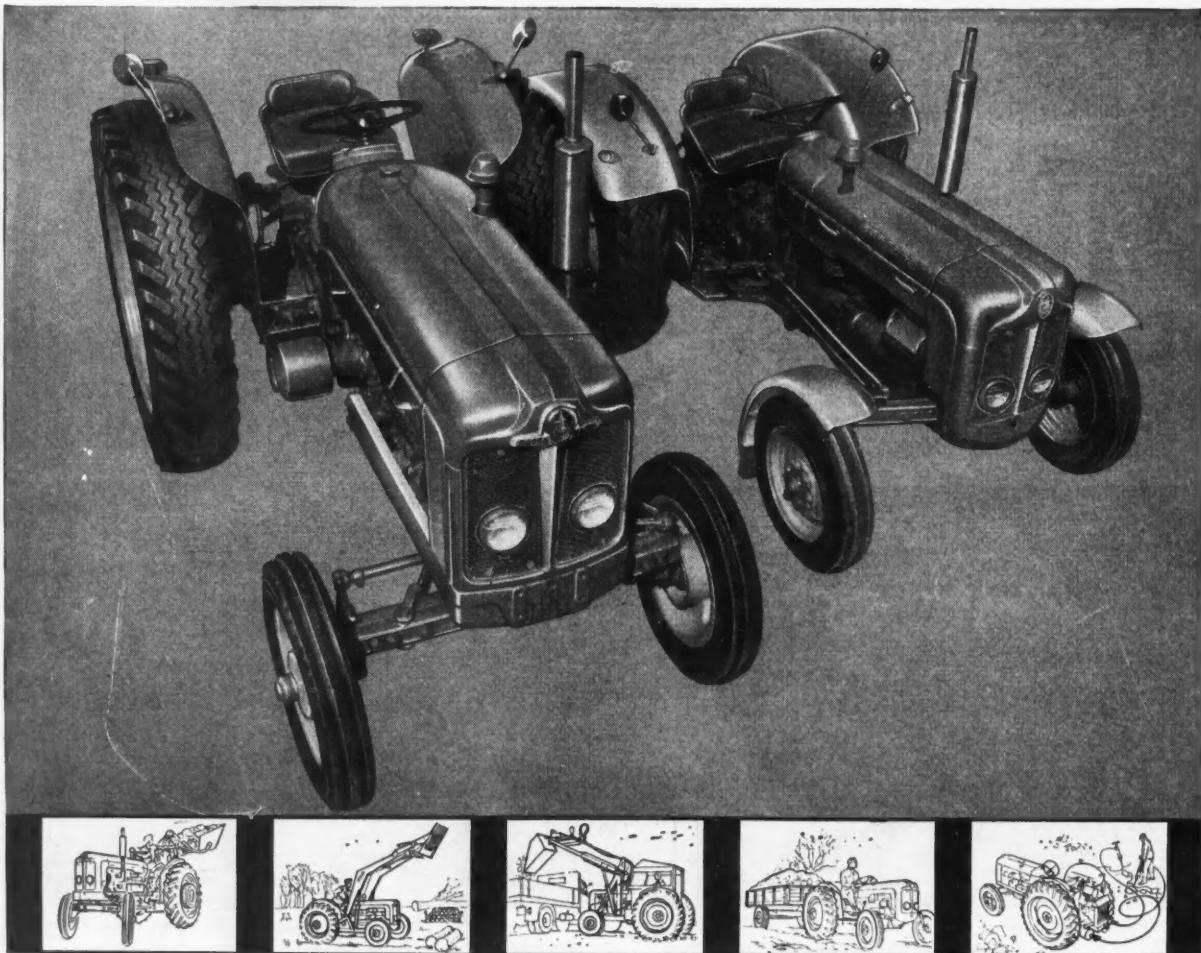
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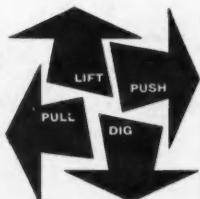


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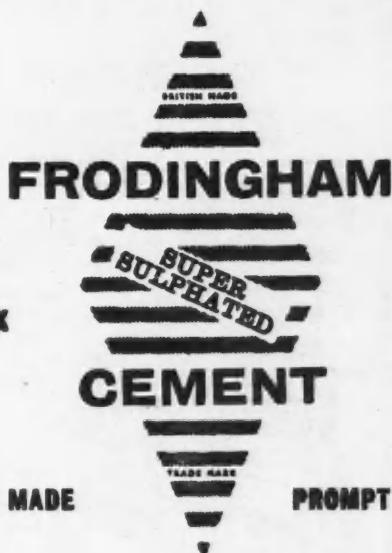
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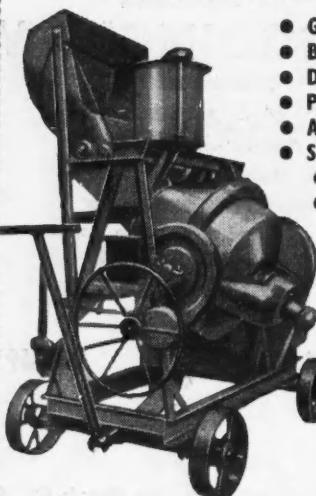


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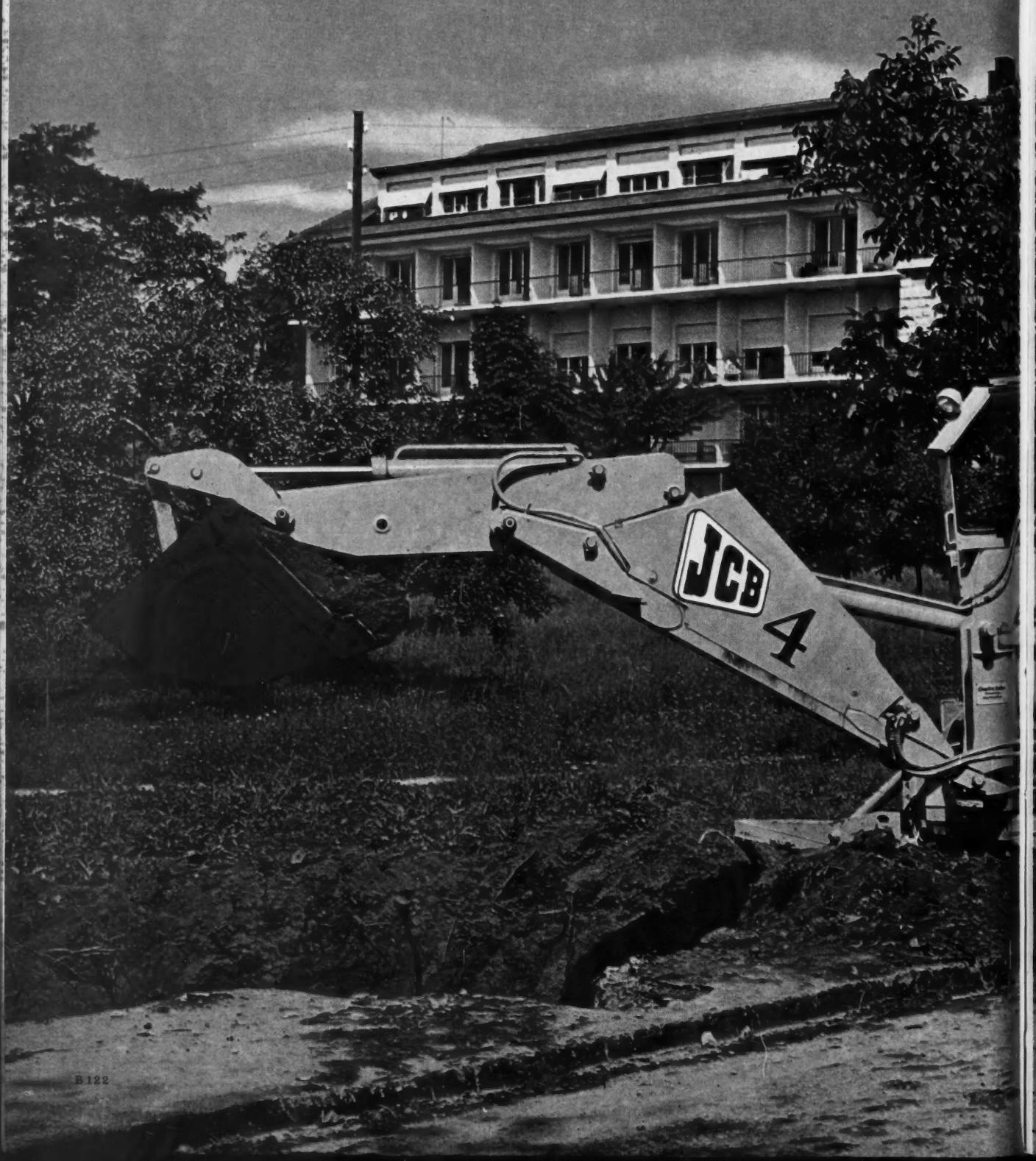
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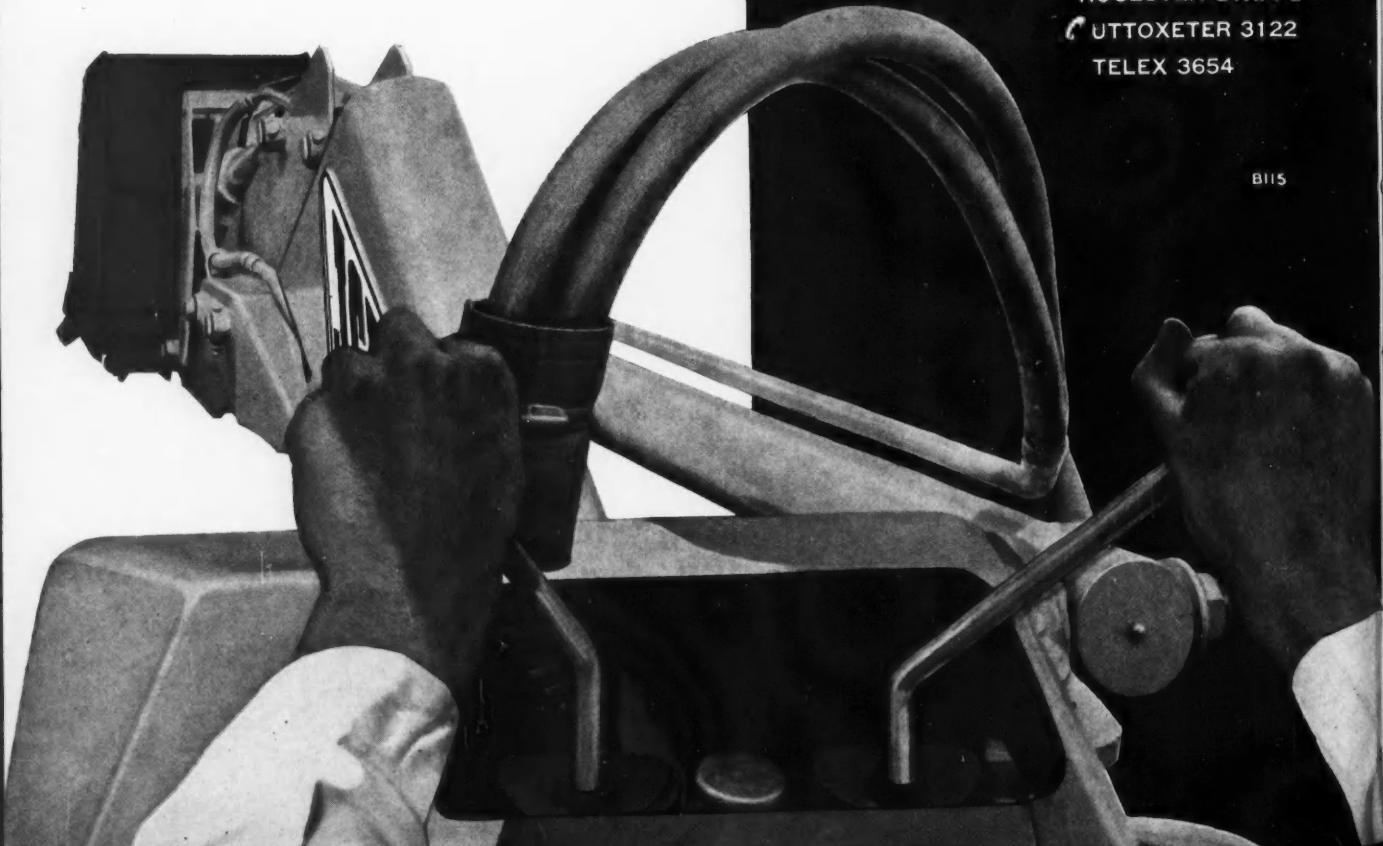


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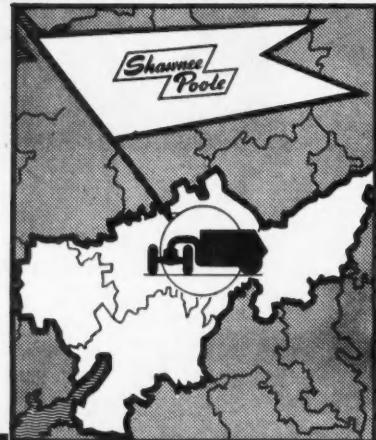


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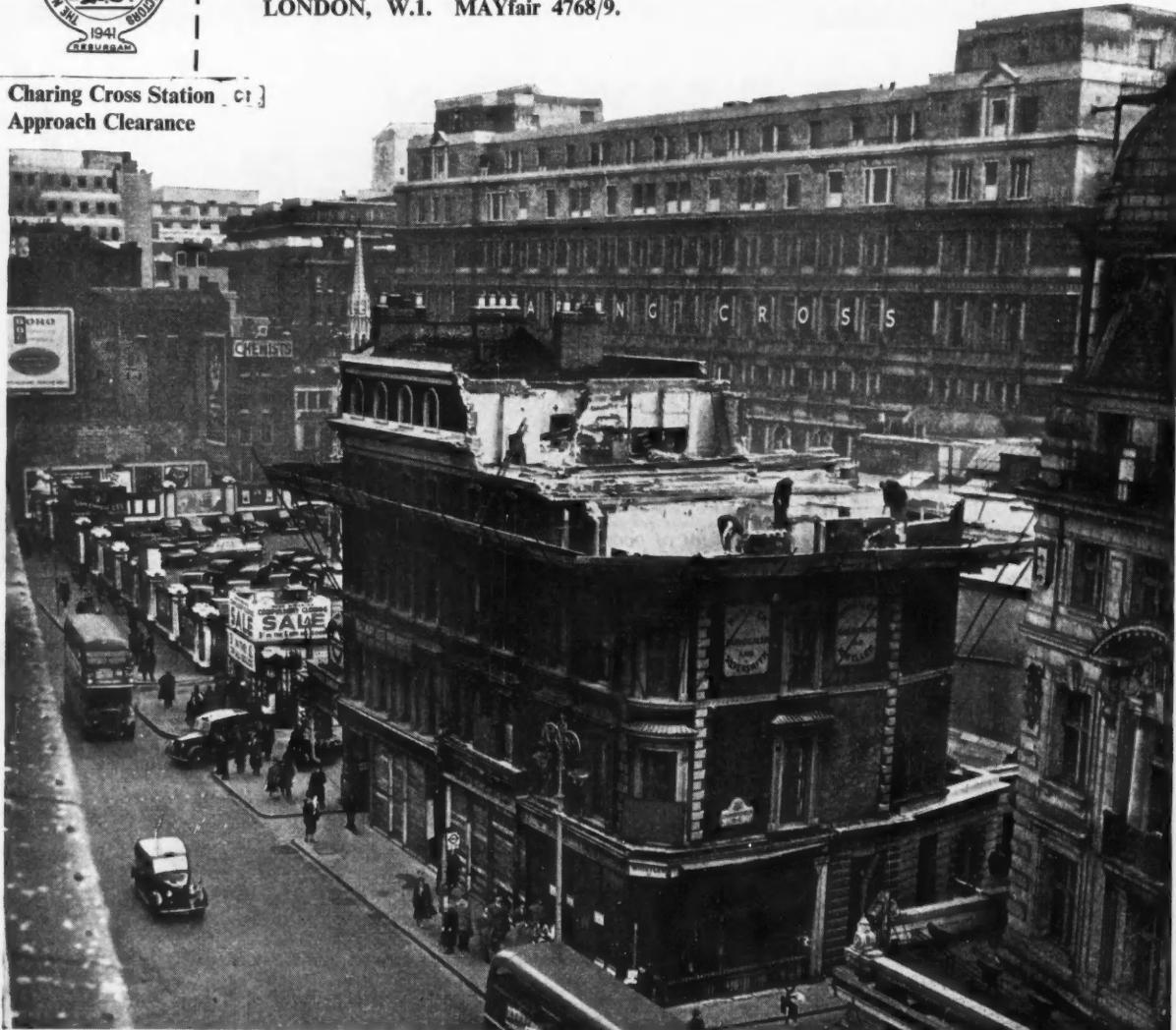
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To overcome anomalies which arise when Standard Forms of Contract unrelated to Demolition projects are considered, the Federation has issued a form of Contract specifically drawn for Demolition work, likewise a schedule of day work charges. In addition the Working Rule Agreement with the N.F.B.T.O. has been reviewed and brought up to date. Copies of all documents are available on application to the Secretary.

For further information apply: THE SECRETARY,

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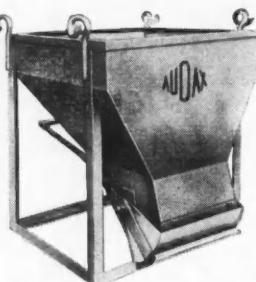
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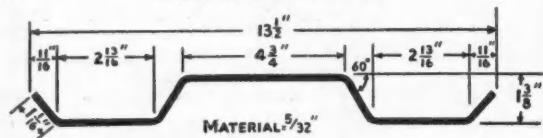
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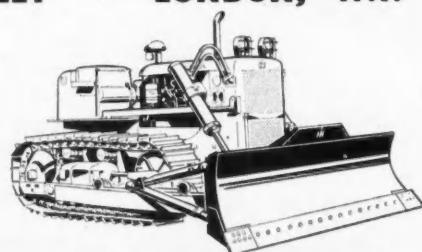
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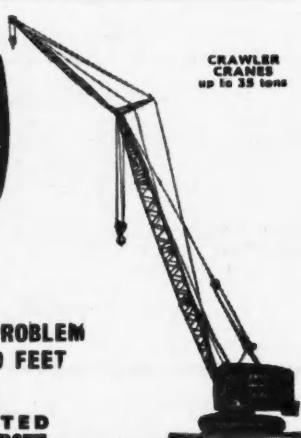


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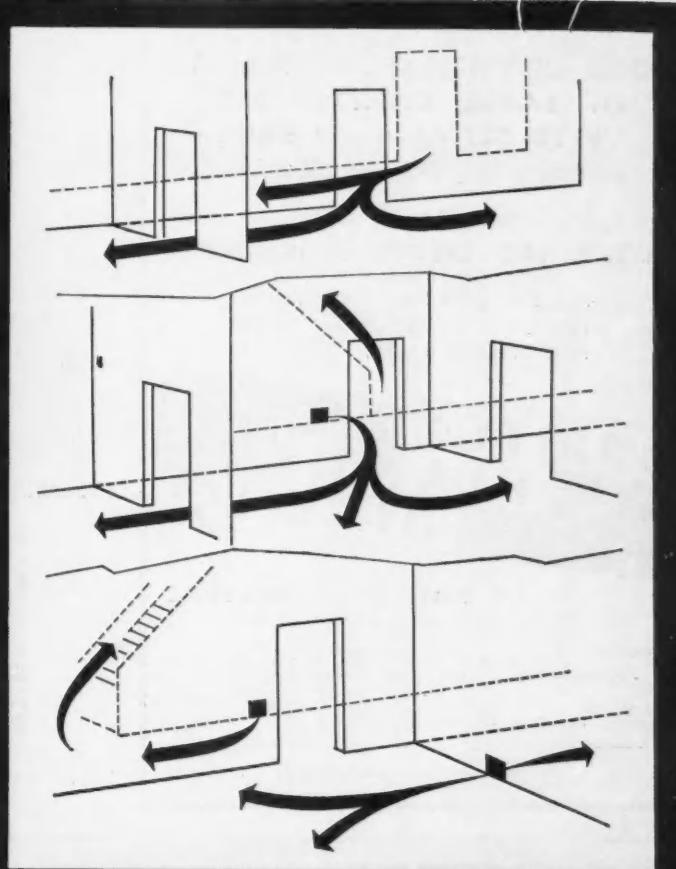
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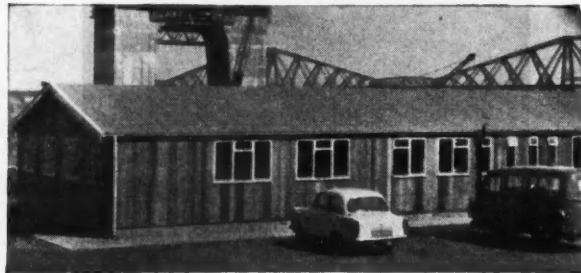
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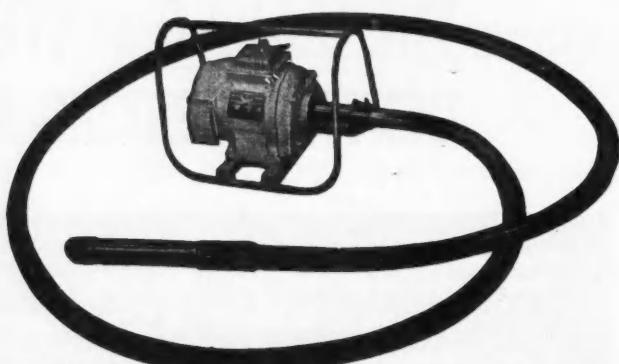
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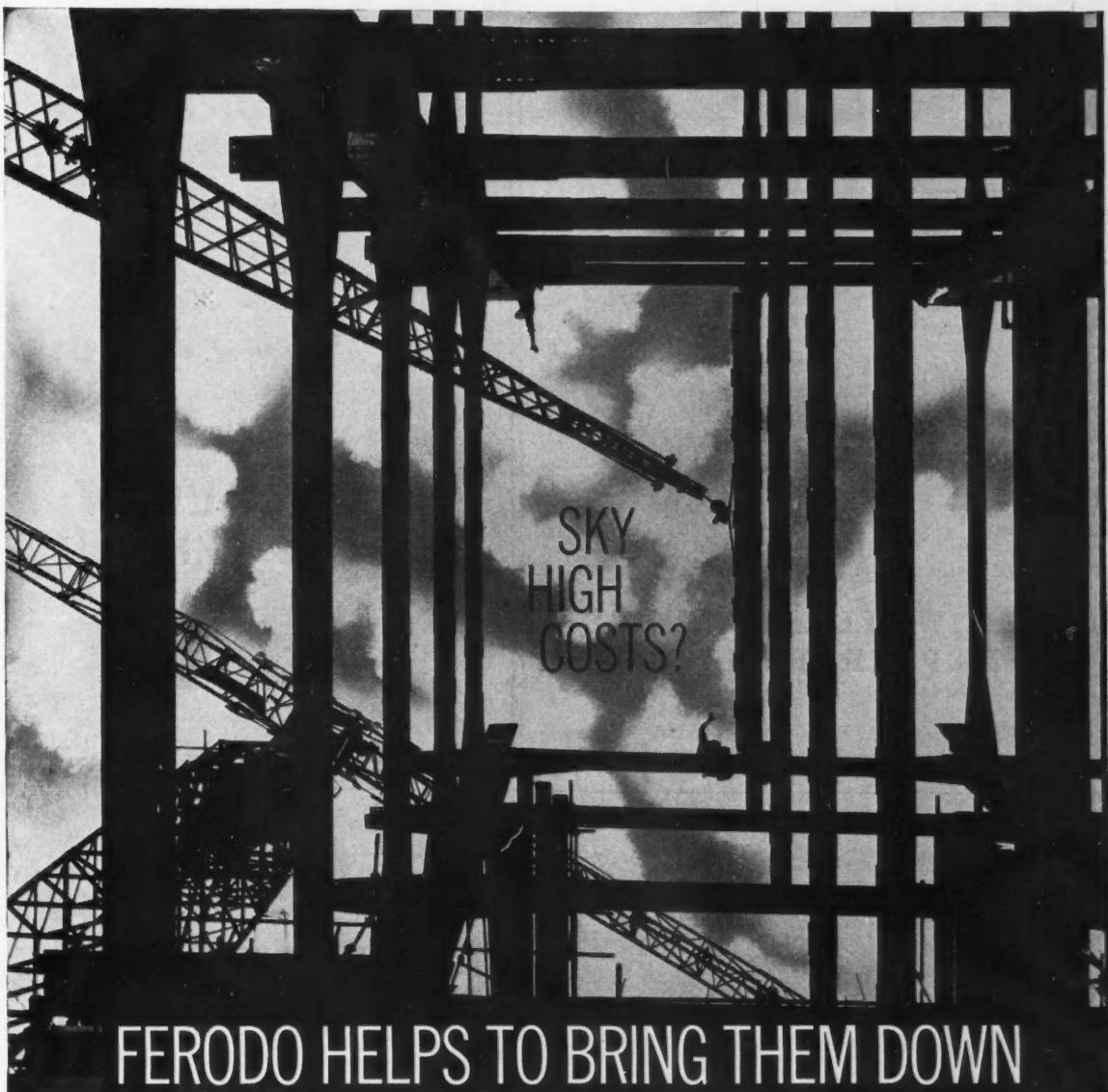
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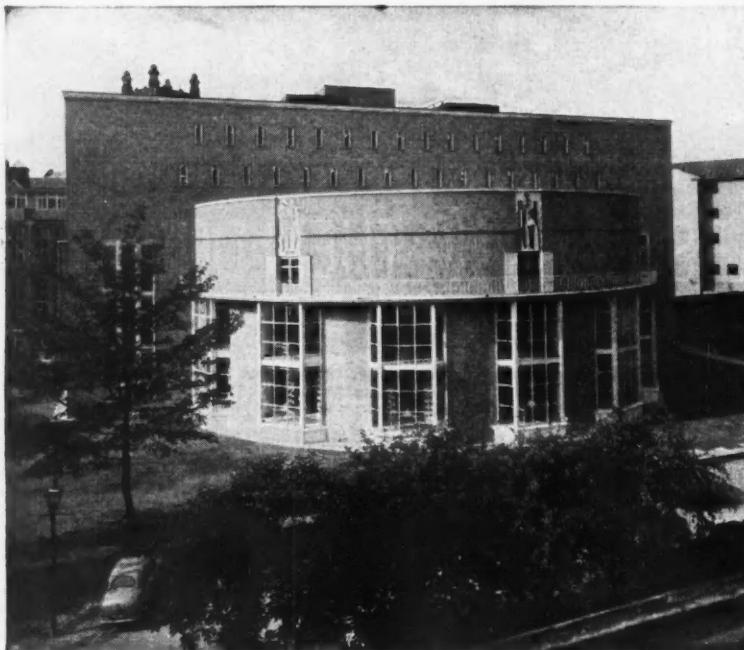
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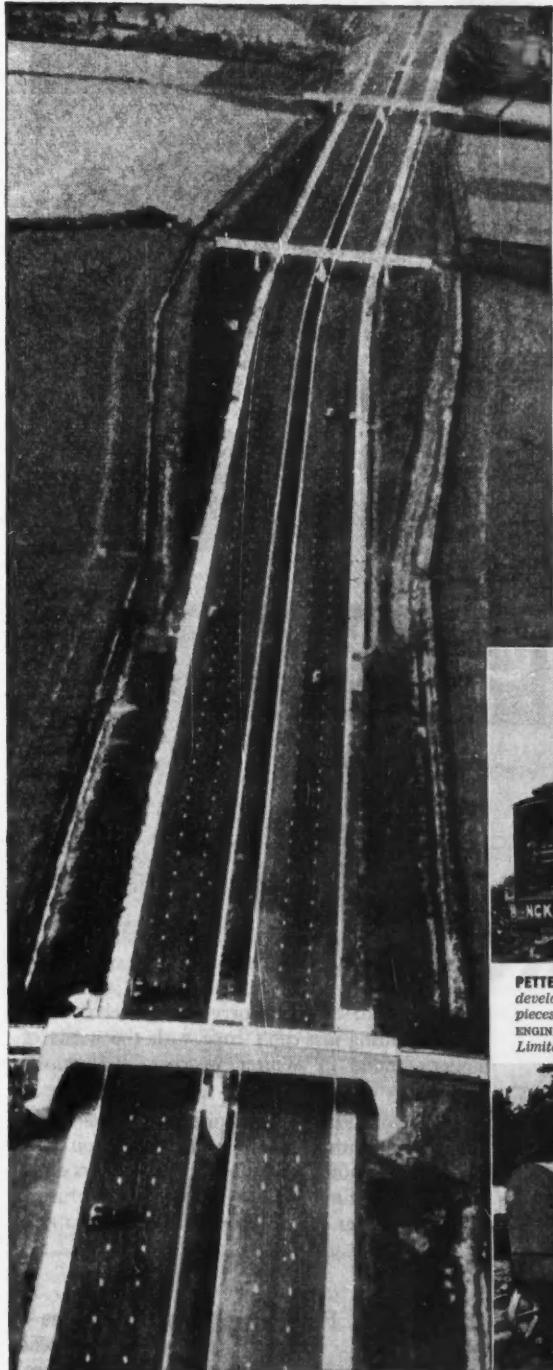
View showing trenching boom

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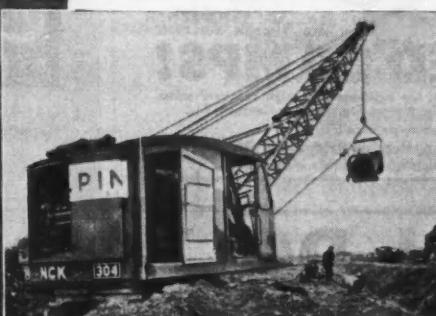
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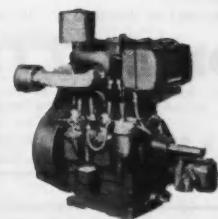
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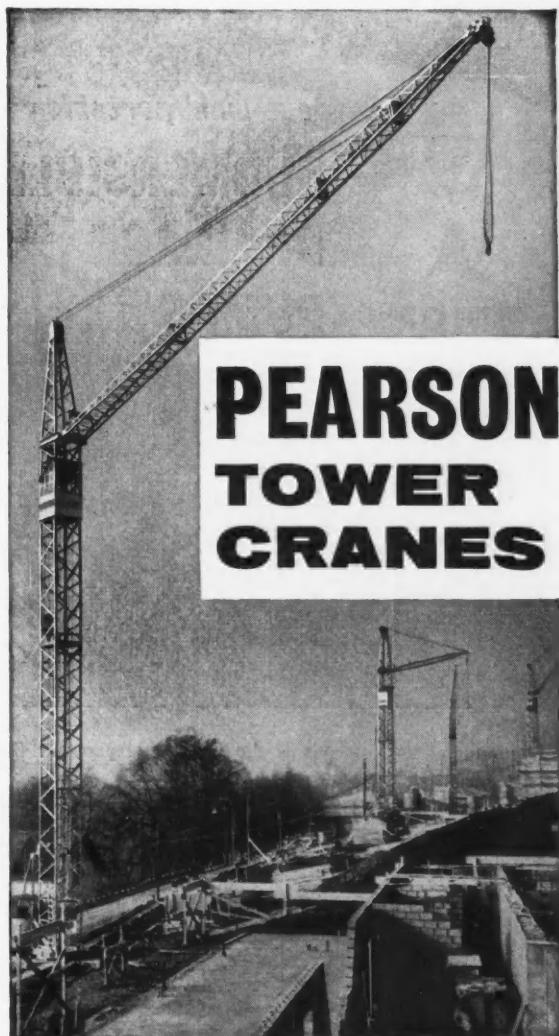
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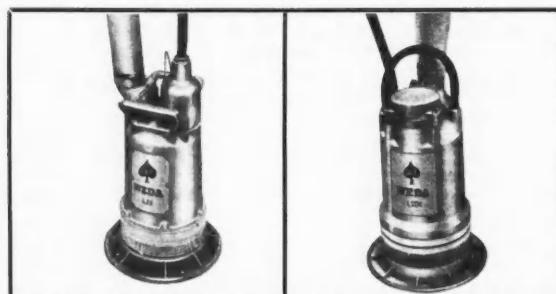


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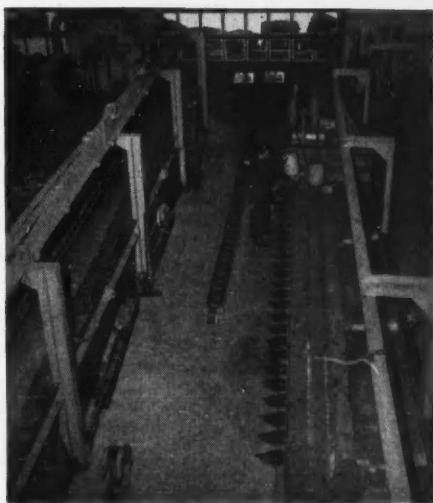
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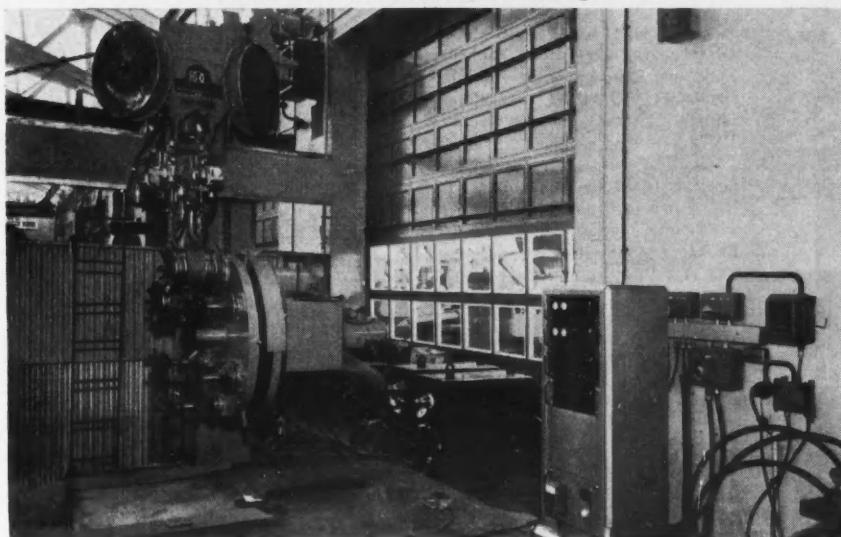


Track Link Rebuilding Machine showing dual beds.



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New Multi-Spindle Roller Rebuilding Machine now installed.



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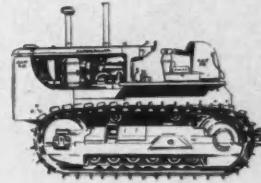
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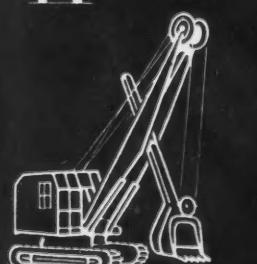
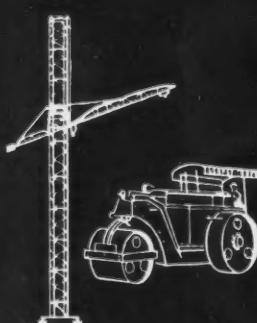
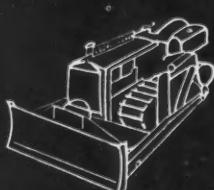
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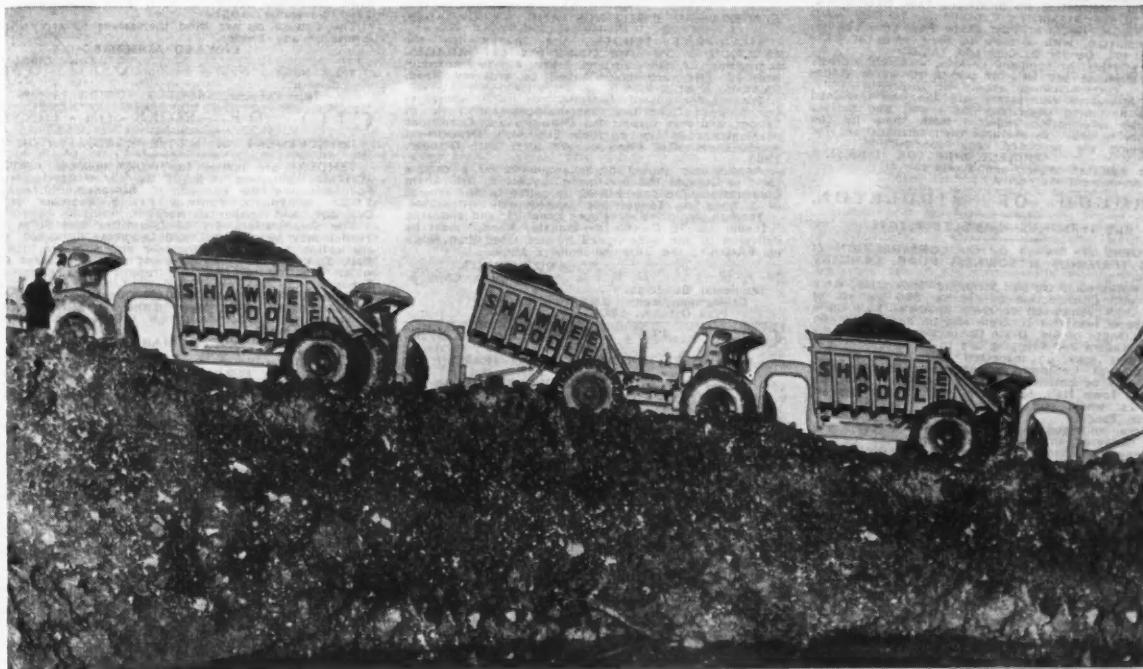


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INDUS BASIN PROJECT
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ADVANCE NOTICE OF INTENT TO INVITE TENDERS FOR THE CONSTRUCTION OF CANALS AND APPURTENANT WORKS.

The above Authority is undertaking the construction of a number of large canals in West Pakistan. Their construction is being financed through the World Bank Development Fund, the operation of which will be administered by the International Bank for Reconstruction and Development (World Bank). The canals, which form a part of the works embodied in the Indus Basin Settlement Plan, will have a total length of about 590 miles and involve an area 445 million cu. yd. of excavation, as well as the construction of several hundred bridges and other canal structures.

The work will be divided into eight or more individual projects. Prospective contractors invited to tender on the first three canals have either already been prequalified or are being prequalified by action presently under way.

The fourth Link Canal to be undertaken will be the Qadirabad-Balloki Link Canal. This canal will extend from Qadirabad on the Chenab River to Balloki on the Ravi River and have a total length of approx. 78 miles, in addition to a feeder of about 10 miles. The main canal will have a capacity of 18,600 cu. ft. per second for the first 17 miles and 14,500 cu. ft. per second thereafter. The feeder canal will have a capacity of 4,100 cu. ft. per second. The canals together will involve approx. 92 million cu. yd. of excavation, nearly half of which will be wet, and the construction of some 100 structures such as regulators, bridges, aqueducts and siphons.

The next canal to be constructed in the same area will be the Rasul-Qadirabad Link Canal which will extend from Rasul on the Jhelum River to Qadirabad on the Chenab River. This link will have a capacity of 12,000 cu. ft. per second and a total length of about 28 miles. Its construction will involve approx. 40 million cu. yd. of excavation, over half of which will be wet, and the construction of some 35 structures such as regulator, bridges, aqueducts and siphons.

The Authority plans to call for TENDERS for the CONSTRUCTION of the QADIRABAD-BALLOKI LINK in the Spring of 1962, and for the CONSTRUCTION of RASUL-QADIRABAD LINK in the Autumn of 1962. Only contractors who have been prequalified by the Authority will be invited to submit Tenders. For this purpose contractors who wish their names to be included on a list to receive the documents for prequalification are requested to submit the following information on or before 15th DECEMBER, 1961, to the Authority's Consultants, TIPTON AND KALMBACH, INC., at Post Office Box 589, Lahore, West Pakistan, with a copy to their office at 831-14th Street, Denver 2, Colorado, U.S.A.

(1) Name or company or firm, with full address.
(2) Name and title of person to whom future correspondence should be directed.

The interested contractors will then be furnished with a document describing the work, and setting forth the information required from them by the Authority in order to evaluate their qualifications for undertaking the proposed canal construction.

PROJECT DIRECTOR (LINKS).
West Pakistan Water and Power Development Authority.

BOROUGH OF MIDDLETON.
BUS TERMINUS—LANGLEY ESTATE.

TENDERS are invited for the CONSTRUCTION of a BUS TERMINUS at BOWNESS ROAD, LANGLEY ESTATE.

The works comprise Soil Stripping, Excavation, Kerb Laying and Construction of approx. 380 sq. yd. of a 7in. thick reinforced concrete Roadway Slab on a 4in. base of lean mix concrete laid on 3in. of clinker. A short length of 6in. Drain Connection and Footways in Tarmacadam and Flagging are to be provided.

Drawings may be inspected and copies of the Conditions of Contract, Specification and Form of Tender may be obtained at the office of the Borough Surveyor, Town Hall, Middleton, subject to a deposit of £2 2s. which will be returned on receipt of a bona-fide Tender.

Tenders endorsed "Bus Terminus—Langley" are to be delivered in plain, sealed envelopes to the undersigned, not later than Noon on WEDNESDAY, 8th November, 1961.

The Council does not bind itself to accept the lowest or any Tender.

F. JOHNSTON,
Town Clerk.

Town Hall,
Middleton,
Near Manchester.
18th October, 1961.

NORTH WEST SUSSEX WATER BOARD.

TENDERS FOR SUPPLIES.

TENDERS are invited for SUPPLY of the UNDERMENTIONED MATERIALS for the 12 months commencing 1st April, 1962:

Gunmetal Stopcocks and Funnels; Cast-Iron Surge Boxes; Fire Hydrants; Stilts; Valves; Precast Concrete Products; Petroleum Spirit; Diesel Oil; Aluminium Sulfate; Sodium Silicate; Hydrated Lime, and Liquid Chlorine.

Specifications and Forms of Tender indicating approximate requirements may be obtained from the Board's Chief Engineer at the above-mentioned address, and Tenders, in plain, sealed envelopes, must be returned by 27th NOVEMBER, 1961.

FREDERICK CLARK,
Clerk of the Board.

32/40 North Street,
Horsham, Sussex.
17th October, 1961.

STEVENAGE DEVELOPMENT CORPORATION.

CONTRACT 600—ROAD 2 EXTENSION.

TENDERS are invited from experienced contractors for the CONSTRUCTION of 420 lin. yd. of 33ft. wide CARRIAGEWAY, 1,180 lin. yd. of 12ft. 4in. wide Cycleway, together with one Underpass, and for Footways, Attendant Earthworks, and Drainage.

Contract documents may be obtained on or after the 1st November, 1961, on application to the undersigned, for a deposit of £5 5s. (returnable only to bona-fide tenderers).

The Tenders are to be received by 5 p.m. on THURSDAY, 23rd November, 1961, in accordance with the conditions set out in the documents.

The Corporation does not bind itself to accept the lowest or any Tender.

G. E. HARDY, A.M.I.C.E., M.I.Mun.E.,
Chief Engineer.

Stevenage Development Corporation,
Danestrone, Herts.

CONTRACTS

BUCKS. COUNTY COUNCIL.

MANUFACTURE AND SUPPLY OF B.C.C. SPECIAL PATTERN SIN. x 4½IN. CONCRETE SPAYED KERB (45 DEG.).

TENDERS are invited for the MANUFACTURE and SUPPLY of 20,000 lin. yd. of the ABOVE KERB for delivery in the CHALFONT ST. PETER AREA.

Contract documents may be obtained on application to the County Surveyor, County Offices, Aylesbury. Tenders must be received by 12 noon not later than 10 a.m. on MONDAY, 13th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the Council.

October, 1961.

EAST SUFFOLK COUNTY COUNCIL.

TENDERS are invited for the SUPPLY of FURNITURE for LOTHINGLAND MODERN SCHOOL. Schedules, Specifications and Tender Forms obtainable from the Chief Education Officer, Education Office, Rose Walk, Ipswich.

Completed Tenders to be received by the CLERK OF THE COUNCIL, County Hall, Ipswich, not later than First Post on 10th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the Council.

October, 1961.

BOROUGH OF ABERYSTWYTH.

REBUILDING OF PORTLAND STREET.

TENDERS are invited for the ABOVE involving the Complete Reconstruction of the Carriageway (total length 190 lin. yd. approx.) and Footways, together with other incidental works.

Plans and Tender documents may be obtained from the Borough Surveyor and Water Engineer, Park Avenue, Aberystwyth.

Sealed Tenders in the envelope provided, should be delivered to me by the undersigned not later than 12 Noon on MONDAY, 27th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

W. P. DAVIES,
Town Clerk.

Town Hall,
Aberystwyth.

11th October, 1961.

BOROUGH OF GILLINGHAM.

WAKELEY ROAD, RAINHAM, KENT.

STAGE 1—76 DWELLINGS AND 14 GARAGES.

FIXED-PRICE TENDERS are invited for the ELECTION of 76 DWELLINGS and 14 GARAGES, comprising 24 One-bedroom Flats, 12 Two-bedroom and 12 Three-bedroom Houses, at Wakeley Road, Rainham.

Persons desirous of tendering may obtain copies of the Bills of Quantities, Specifications and Form of Tender, and may inspect the Drawings and Conditions of Contract, at the Borough Engineer's Department during usual office hours on and after 24th October, 1961.

Applications should be accompanied by a cheque for Five Guineas (£5 5s.) made payable to Gillingham Corporation. The sum will be refunded on receipt of a bona-fide Tender, subsequently withdrawn.

Tenders, sealed envelopes supplied and endorsed "Tender for 76 Dwellings—Wakeley Road," must be delivered to me by the undersigned by not later than Noon on FRIDAY, the 24th November, 1961.

ROLAND NEWNES,
Town Clerk.

Municipal Buildings,
Gillingham, Kent.

17th October, 1961.

CITY OF WORCESTER.

MOOR STREET REDEVELOPMENT—PART I.

SITE COMPLETION WORKS.

FIXED-RATE TENDERS are invited for the ABOVE WORKS, which comprise Reconstruction and Drainage for a length of 550 lin. yd. of 30ft. wide ROAD, with Paving and Turfing to adjacent development.

Documents obtainable from the City Engineer and Surveyor, 12 Brimie Street, Worcester, on payment of a Two Guinea deposit, which will be returned on receipt of a bona-fide Tender.

Tenders to be posted, in the envelope provided, to reach the undersigned not later than MONDAY, the 13th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

BERTRAM WEBSTER,
Town Clerk.

Guildhall,
Worcester.

17th October, 1961.

WELLINGBOROUGH RURAL DISTRICT COUNCIL.

EARLS BARTON MAIN DRAINAGE.

TENDERS are invited from suitably experienced contractors for the FOLLOWING WORK at Earls Barton near Wellingborough:

SEWERS—
7,500yds. of 6in., 9in., 12in., 15in., 18in. and 21in. Concrete Tube and Cast-iron Sewers.
108 Concrete Tube Manholes.

Reconnection of existing House Drains to new Sewers.

Temporary Reinatement of Trenches.

R.C. Grit Tank, Storm Overflows, Commutator R.C. Chamber, etc.

Two 31ft. dia. Radial Flow R.C. Settling Tanks.
Three 97ft. 6in. dia. R.C. Filters.
One 31ft. dia. Radial Flow R.C. Humus Tank.
Two 35ft. x 12ft. R.C. Stormwater Tanks.
Twenty-eight 35ft. x 13ft. 6in. Concrete Sludge Drying Beds.

Two 15ft. x 8ft. Concrete Grit Storage Beds.
Pumping Station and Messroom, etc.

Fencing, Compound, Roads, Footpaths, and ancillary works.

Detail Drawings may be seen at the Offices of the Engineers, MESSRS. PICK, EVERARD, KEAY AND GIMSON, 6 Millstone Lane, Leicester, from whom the Specification, Bill of Quantities and Key Plans may be obtained on payment of a deposit of Five Guineas (£5 5s.), which will be refunded on receipt of a bona-fide Tender.

Tenders, on the form supplied and in the envelope provided, are to be delivered to the undersigned not later than 10 a.m. on MONDAY, 27th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

J. BAXENDALE,
Clerk of the Council.

Rural Council Offices,

Oxford Street,

Wellingborough.

CONTRACTS

COUNTY BOROUGH OF SWANSEA.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

PROPOSED DERV AND DIESEL OIL INSTALLATION, CENTRAL DEPOT, PIPE HOUSE WHARF.

TENDERS are invited for the SUPPLY, DELIVERY and INSTALLATION of TANKS and PUMPS for the proposed Derv and Diesel Oil Installation at the Central Depot, Pipe House Wharf.

Further particulars and Form of Tender may be obtained from the Borough Engineer and Surveyor, Guildhall, Swansea.

Tenders, sealed and endorsed "Tender for Derv and Diesel Oil Tanks and Pumps," must be forwarded to me by the undersigned to arrive not later than WEDNESDAY, the 28th November, 1961.

The envelope in which the Tender is enclosed must not bear any sign or mark indicating the sender.

The Council does not bind itself to accept the lowest or any Tender.

J. WATKINS,
Town Clerk.

The Guildhall,

Swansea.

October, 1961.

BOROUGH OF GOSPORT.

ROWNER HOUSING ESTATE.

ADVANCE PREPARATION OF ROADS AND SEWERS FOR SITE "E."

TENDERS are invited for the FOLLOWING:
The Clearance of the Site; the Laying of approx. 566 lin. yd. of 6in. to 12in. dia. Pipes.

the Construction of Seven Manholes and Eight Gullies; the Laying of approx. 460 lin. yd. of Concrete Kerb Foundation, 1,224 sq. yd. of Lean-Mix Concrete Carriageway, 2,000 sq. yd. of Reinforced Concrete Pavement, together with other appurtenant works in connection with the above.

Tender documents are obtainable from the Borough Engineer, The Hall, Trinity Green, Gosport, upon deposit of Two Guineas, returnable on receipt of a bona-fide Tender, subsequently withdrawn, and the return of the documents.

Tender Forms should be submitted to me, in the small endorsed envelope provided, and should bear no mark indicating the sender. The priced Bills of Quantities should at the same time be submitted to me in the large endorsed envelope provided, and should bear the name of the tenderer. Both envelopes must reach my Office not later than WEDNESDAY, 22nd November, 1961.

The Council does not bind themselves to accept the lowest or any Tender.

EDWARD ADDENBROOKS,
Town Clerk.

Town Hall,

Gosport.

19th October, 1961.

CITY OF STOKE-ON-TRENT.

IMPROVEMENT OF GROVE ROAD, FENTON.

TENDERS are invited for WORK on the ABOVE SCHEME, consisting of 3,500 sq. yd. of Carriageway Foundation, 4,100 sq. yd. of Macadam Surfacing, 1,900 sq. yd. of Footway Paving, together with Drains and incidental works.

The Specification, Bill of Quantities and Form of Tender may be obtained, and Drawings inspected, on application to the City Engineer and Surveyor, Town Hall, Stoke-on-Trent, on payment of a deposit of £3 which will be returned on receipt of a bona-fide Tender.

Tenders and priced Bill of Quantities must be delivered to the undersigned, in the separate envelopes provided, before 12 Noon on WEDNESDAY, 15th November, 1961.

HARRY TAYLOR,
Town Clerk.

THURROCK URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

WIDENING AND IMPROVEMENT—LOWER DUNTON ROAD (C.3), HORNDON-ON-THE-HILL.

TENDERS are invited for the CONSTRUCTION of approx. 3,100 sq. yd. of 6in. CONCRETE CARRIAGEWAY, 2,000 sq. yd. Surfacing Works, 750 lin. yd. Kerbing, 800 sq. yd. Hoggan Footpath, 580 lin. yd. Sewers and incidental works.

Copies of the Form of Tender, Specification and Bill of Quantities may be obtained from the Engineer and Surveyor, Council Offices, Whitehall Lane, Grays, on payment of £2 2s. deposit which will be refunded on receipt of a bona-fide Tender.

Drawings and General Conditions of Contract may be inspected at the Council Offices during normal office hours.

Tenders, accompanied by Specification, in a plain sealed envelope endorsed "Lower Dunton Road," must be delivered to reach the undersigned by not later than 12 Noon on TUESDAY, 14th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

A. E. POOLE,
Clerk of the Council.

Council Offices,

Whitehall Lane,

Grays.

18th October, 1961.

THE URBAN DISTRICT COUNCIL OF HAVANT AND WATERLOO.

The above Council invite TENDERS for the SUPPLY of MATERIALS and EXECUTION OF WORK for the 12 months ending 31st December, 1962, as follows:

(1) Supply of Cold Bituminous Emulsion.

(2) Supply of Granite Chippings.

(3) Supply of Artificial Stone Paving, Kerb, Channel Blocks and Concrete Posts.

(4) Supply of Shingle, Sand, Ballast and Frost Grit.

(6) Hire of Mechanical Transport.

(8) Supply of Tar and Bitumen for application by pressure spraying machine.

(9) Supply of Manhole Covers and Gully Grates.

(13) Supply of Ashes, Clinker, Rejects and Hardcore.

(19) Bituminous Materials—supply, and supply and lay.

(21) Hire of Excavators, Bulldozers, etc.

Forms of tender may be obtained from the Engineer and Surveyor, 1 Park Road North, Havant.

Tenders must be delivered not later than 12 Noon on SATURDAY, the 18th November, 1961, to the CLERK OF THE COUNCIL, Town Hall, Havant.

No Tender will be received except in a plain sealed envelope which must bear the word "Tender," followed by the subject to which it relates, but shall not bear any name or mark indicating the sender.

The Council do not bind themselves to accept the lowest or any Tender.

The Council do not bind themselves to accept the lowest or any Tender.

CONTRACTS

COUNTY COUNCIL OF ESSEX.
CHELMSFORD-RAYLEIGH ROAD, A.130.

RAYLEIGH SPUR ROAD—STAGE 1—RAWRETH DIVERSION.

TENDERS are invited from contractors with experience of the necessary equipment, for the CONSTRUCTION of approx. three-quarters of a mile of DUAL 24ft. CONCRETE CARRIAGeways (26ft. wide as laid) between Rawreth Lane and a point on the Rayleigh Spur Road, A.130, near the Carpenters Arms public house. The work also involves the Construction of a Roundabout at the junction with A.129, and the Construction of a Reinforced Concrete Culvert of 15ft. span.

Tender documents may be obtained from the Office of the County Surveyor, Old Court, Arboretum Lane, Chelmsford, on payment of a deposit of £15 which will be returned if a bona-fide Tender is received and not subsequently withdrawn, and drawings in addition to those issued with the documents may be inspected by appointment at that Office.

Tenders must be delivered in the envelope provided, to the undersigned, not later than First Post on MONDAY, 11th December, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

CHRISTIAN BERRIDGE,
Clerk of the County Council.

COUNTY BOROUGH OF BRIGHTON.
WATER DEPARTMENT.

MAINLAYING—FALMER HILL AREA.

FIXED-PRICE TENDERS invited for the LAYING and JOINING of two 18in. dia. FLEXIBLE JOINED SPUN-IRON MAINS, each approx. 490 lin. yd. in length, laid as twin main in one trench. All spun-iron pipes and specials will be provided near site by the Corporation.

Conditions of Contract, Specification and Tender documents obtainable from Chief Engineer, Water Department, 12 Bond Street, Brighton, on deposit of £2.2s. which will be refunded on receipt of bona-fide Tender and return of all documents supplied.

Tenders, enclosed in plain sealed envelopes not bearing any name or mark indicating the sender, and endorsed "Swan Mains," to be delivered to me before Noon, 29th NOVEMBER, 1961.

The Corporation do not bind themselves to accept the lowest or any Tender.

W. O. DODD,
Town Clerk.

Town Hall,
Brighton.
October, 1961.

BOROUGH OF MITCHAM.
PHIPPS BRIDGE REDEVELOPMENT SCHEME—
STAGE II—CONTRACT NO. 5—HOUSING.

TENDERS are invited for the CONSTRUCTION of 245 DWELLINGS in Five Blocks of Four-storey and Two Blocks of 11-storey Construction, together with Stores, Garages, Site Works, etc.

Contractors wishing to tender upon Bills of Quantities should submit them not later than First Post on MONDAY, 5th November, 1961, to the Borough Engineer and Surveyor, Town Hall, Mitcham, at whose Office the Drawings and General Conditions of Contract may be inspected during normal office hours.

Tenders, in the envelope provided, must be delivered to the undersigned, not later than First Post on THURSDAY, 14th December, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

R. H. WHITE,
Town Clerk.

Town Hall,
Mitcham, Surrey.
16th October, 1961.

FRINTON AND WALTON
URBAN DISTRICT COUNCIL.
MAIN INTERCEPTING SEWERS FOR WALTON
AND THE NAZE.

CONTRACT NO. 1.

The Council invite TENDERS on a Fixed-price Basis from experienced civil engineering contractors for the CONSTRUCTION of MAIN INTERCEPTING SEWERS comprising approx. 2 miles of 6in. dia. Extra Strength Reinforced Spun Concrete Pipes fitted with Cornelius Flexible Joints, 45in., 30in., 27in., 24in., 21in., 15in. dia, and 12in. together with Concrete Manholes, and other incidental works.

The Contract will be subject to the I.C.E. Conditions of Contract, a copy of the Form of Tender, Specification, Bills of Quantities and the Drawings may be obtained from the Engineers, MESSRS. WILLCOX, RAIKES AND MARSHALL, 33 Great Charles Street, Birmingham, 3, on and after 25th October, 1961, on payment to them of a deposit of Five Guineas, by cheque drawn in favour of the Council, which will be refunded on receipt of a bona-fide Tender and the return of all documents and drawings supplied to them.

Tenders, on the form supplied, are to be delivered to the undersigned, in the envelope provided, not later than 12 o'clock Noon on MONDAY, the 27th day of November, 1961, together with a covering letter giving particulars of works of a similar nature recently carried out, the cost, and the names of the Engineers responsible.

The Council do not bind themselves to accept the lowest or any Tender.

(Signed) J. P. MCARNEY,
Clerk of the Council.

The Council House,
Frinton-on-Sea,
Essex.
26th October, 1961.

ATCHAM RURAL DISTRICT COUNCIL.
PIMHILL WATER SUPPLY EXTENSIONS.

TENDERS are invited for the PROVISION, LAYING and JOINING of 24 miles of SPUN-IRON WATER MAINS, of 9in. dia., together with Fittings, Cable, and ancillary works.

Tender documents may be obtained from the Office of J. R. SOWERBY, M.B.E., M.I.M.E., Engineer and Surveyor to the Council, 24 St. John's Hill, Shrewsbury. Applications for Tender documents must be accompanied by a deposit of £5 which will be returned on receipt of a bona-fide Tender not later than Noon on FRIDAY, 8th January, 1961.

The Council does not bind itself to accept the lowest or any Tender.

W. T. BROWN,
Clerk of the Council.

24 St. John's Hill,
Shrewsbury.
20th October, 1961.

CONTRACTS

CAMBRIDGESHIRE COUNTY COUNCIL.

LONDON-NORWICH TRUNK ROAD, A.11.

RECONSTRUCTION AT JUNCTION WITH
ROUTE A.505.

CONTRACT C.6117.

TENDERS are invited for the CONSTRUCTION of approx. 11,000 sq. yd. of NEW ROAD and WIDENING of EXISTING ROAD, comprising approx. 5,000 cu. yds. 1,750 lin. yd. Kerbing, Broken Concrete Base Course, Gravel Asphalt, Drainage, and ancillary works.

Documents in respect of the work may be obtained from the County Surveyor, R. LACEY, M.I.C.E., at the address given below.

Tenders, in the official envelope, must reach the undersigned, not later than 12 Noon, SATURDAY, 11th November, 1961.

CHARLES PHYTHIAN,
Clerk of the Council.

Shire Hall,
Castle Hill,
Cambridge.

BOROUGH OF DARTFORD.
STONE PARISH COUNCIL.

GROUP "A" STREET LIGHTING—WATLING STREET
(PART).

TENDERS are invited for SUPPLY and ERECTION of 26 COMPLETE LIGHTING UNITS, comprising 25ft. Reinforced Concrete Columns and 400-W MBF/U Lamps and Lanterns.

The Form of Tender and other documents can be obtained on application to the undersigned, upon payment of a deposit of £2.2s. which will be refunded on receipt of a bona-fide Tender and return of all documents supplied.

Tenders, in a plain sealed envelope marked "Watling Street Lighting," but bearing no name or mark indicating the sender, must be received by me not later than 12 Noon on TUESDAY, 28th November, 1961.

The Corporation does not bind itself to accept any Tender.

THOS. ARMSTRONG,
Town Clerk.

BOROUGH OF BRENTFORD & CHISWICK.
SERVICE ROAD FROM THE HAM TO
ST. LAWRENCE'S CHURCH, BRENTFORD.

TENDERS are invited for the CONSTRUCTION of a SERVICE ROAD and SEWERS, comprising a Carrigeway of Bitumen Macadam Surfacing on Hard-core Foundation, Kerbing, Footways, and 9in. dia. Soil and Surface Water Sewers, and 63 lin. yd. area of carriageway, 425 sq. yd.; length of carriageway, 70 ft.

Drawings may be inspected, and Tender documents obtained at the Office of the Borough Engineer, Town Hall, Chiswick, W.4.

Sealed Tenders, in the envelope provided, and endorsed "Service Road—The Ham, Brentford," must be received by me not later than 4 p.m., WEDNESDAY, 13th December, 1961.

W. F. J. CHURCH,
Town Clerk.

Town Hall,
Chiswick, W.4.

CITY OF BIRMINGHAM.
TO PUBLIC WORKS CONTRACTORS.

The PUBLIC WORKS COMMITTEE invite TENDERS on a Fixed-price Basis for a Measure and Value Contract for the CONSTRUCTION of a FOOTBRIDGE in Steel and Reinforced Concrete over the River in Castle Bromwich, W.4, established 1921.

The Conditions of Contract (which include the Corporation's Fair Wage and Conditions of Labour Clause) and the Drawings may be inspected, and the Specification, Bills of Quantities and Form of Tender obtained on payment of £2.2s. at the Office of SIR HERBERT MELLON, City Engineer and Surveyor, Worcester House, Civic Centre, Birmingham, 3, to whom all cheques should be made payable. The deposit will be returned on receipt of a bona-fide Tender.

Tenders, enclosed in the envelope provided for the purpose, must be sealed and addressed to the Town Clerk, Office of the Corporation, 1921, not later than Friday, 23rd November, 1961, when they will be opened. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,
Town Clerk.

Council House,
Birmingham, 1.

ABINGDON RURAL DISTRICT COUNCIL.
MAIN DRAINAGE OF WOOTON ROAD—STAGE III.

W11/1 CONTRACT NO. 2.

TO CIVIL ENGINEERING AND PUBLIC WORKS CONTRACTORS.

The above Council invites TENDERS for the CONSTRUCTION of approx. 4 miles of 6in. and 9in. dia. SEWERS, together with Manholes and ancillary work; and the Construction of a Small Pumping Station.

Particulars and Specification may be obtained, and Plans inspected, at the Offices of the Consulting Engineers, MESSRS. HOWARD HUMPHREYS AND SONS, West Street, Epsom, Surrey, on and from Monday, 6th November, 1961, until Friday, 24th November, 1961, between 10 a.m. and 4 p.m., upon payment of a deposit of £3 3s. by cheque made payable to the Council, which deposit, after the Council has reached a decision, will be returned to each contractor who has submitted a bona-fide Tender not subsequently withdrawn.

Prints of the Contract Drawings can be obtained on loan from the Consulting Engineers on payment to them of £2 by cheque made payable to Howard Humphreys (Services). All prints so supplied are to be returned to the Council, on the official form, to be delivered to the undersigned, in sealed envelopes endorsed "Tender for Main Drainage of Wooton Road—Stage III," but bearing no name or other mark indicating the sender, by MONDAY, 4th December, 1961.

The Council does not undertake to accept the lowest or any Tender.

L. F. RADFORD,
Clerk of the Council.

Council Offices,
60 Bath Street,
Abingdon, Berks.
17th October, 1961.

CONTRACTS

GLAMORGAN COUNTY COUNCIL.

HIGHWAYS ACT, 1959—PRIVATE STREET WORKS.

TENDERS are invited for the MAKING GOOD of Carrigeway, 150 sq. yd., Footways, 475 sq. yd.; Kerbing, 250 lin. yd.; Stormwater Drainage, 40 lin. yd.; and incidental works.

Specification, Bill of Quantities and Form of Tender can be obtained from the County Surveyor, County Hall, Cardiff, on payment of a deposit of £3 which will be returned, subject to the Conditions of Tender, on receipt of all documents supplied.

General Conditions of Contract and Drawings may be seen at the Offices of the County Surveyor during normal working hours.

Contractors will be required to pay the recognised rates of wages and to observe the recognised hours of labour.

Sealed Tenders, made out on the prescribed form and accompanied by a priced Bill of Quantities, are to be delivered, in the envelope provided, at the County Hall, Cardiff, by the First Post on WEDNESDAY, 29th November, 1961, addressed to the Clerk of the County Council.

The County Council do not necessarily accept the lowest or any Tender.

RICHARD JOHN,
Clerk of the County Council.

County Hall,
Cardiff,
23rd October, 1961.

COUNTY BOROUGH OF READING.
HALS ROAD FOUL SEWER.

TENDERS are invited for CONSTRUCTION of 150yd. 6in. dia. pitch FIBRE FOUL SEWER through Private Gardens in Hals Road, Tilehurst, Reading.

General Conditions and Drawings may be inspected, and Bill of Quantities, etc., obtained for fee of Two Guinea, together with a deposit of £10, from the Borough Surveyor's Office, P.O. Box No. 17, Town Hall, Reading.

Tenders to be delivered to TOWN CLERK, Town Hall, Reading, by 12 Noon on 4th DECEMBER, 1961.

No Tender considered unless enclosed in plain sealed envelope, marked "Hals Road Foul Sewer," but bearing no indication of sender.

The Corporation do not bind themselves to accept any Tender.

W. F. J. CHURCH,
Town Clerk.

HARTISMERE RURAL DISTRICT COUNCIL.

BACTON—SEWERAGE AND SEWAGE DISPOSAL SCHEME.

FIXED-PRICE TENDERS are invited from experienced contractors for the CONSTRUCTION of the FOLLOWING WORKS—The Laying of approx. 3,200 lin. yd. of 6in. dia. Glazed Stoneware, Spun Concrete and Spun-Iron Pipes in Roads and Fields, together with 41 Concrete and Brick Manholes.

SEWERAGE DISPOSAL WORKS—Comprising Two Horizontal Flow Settlement Tanks, Circular Filter Bed 38ft. dia., and 100m. lin. with Concrete Sludge Drying Beds.

Applications for Tender documents should be made to the Council's Engineer and Surveyor, G. M. KENWORTHY, A.M.C.E., 1, Hobson Street, Ipswich, Suffolk, accompanied by a deposit of Five Guineas which will be returned in full on the receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, together with priced Bills of Quantities, in a sealed envelope, endorsed "Bacton Sewerage and Sewage Disposal Scheme," must be delivered to the undersigned, not later than the First Post on 30th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

FRANK CUNLIFFE,
Clerk to the Council.

Council Offices,
Castleton Way,
Eye, Suffolk.

HOWDEN RURAL DISTRICT COUNCIL.

CO-ORDINATION OF WATER SUPPLIES—
CONTRACT NO. 5.

TENDERS are invited for the PROVISION OF MATERIALS and CONSTRUCTION of a 500,000-gallon RESERVOIR, together with approx. 1,900 lin. yds. of 6in. dia. 1,170 lin. yd. of 10in. dia. CLASS "B" SPUN-IRON WATER MAINS at HOLME-ON-SPALDING MOOR, in the Howden Rural District of Yorkshire.

Contractors wishing to tender for these works should apply for the documents to the Council's Consulting Engineer, 100 Wood Lane, Headingley, Leeds, 6, enclosing a deposit cheque value Three Guineas, made payable to the Howden R.D.C., such deposit to be refunded on receipt of a bona-fide Tender and the return of all the documents.

Tenders, with the Bills of Quantities priced in ink, are to be submitted to the undersigned not later than 12 Noon on the 24th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

JOHN GREEN,
Clerk to the Council.

14 St. John Street,
Howden,
Goole, Yorks.

CHELTENHAM AND GLOUCESTER JOINT WATER BOARD.

NEW PUMPHOUSE AND INTAKE—TEWKESBURY.

The Cheltenham and Gloucester Joint Water Board invite TENDERS for the CONSTRUCTION of a NEW PUMPHOUSE and RIVER INTAKE at MYTHE WATERWORKS, Tewkesbury.

The work consists of Excavation in Soft Strata in Coford, the Reinforced Concrete Work for the Pumphouse, the Pumphouse for three low lift pumps and three high lift pumps, General Building Work for the R.C. framed Pumphouse Superstructure and Amenities Block, and the Laying of Associated Water Mains and Drains. The Consulting Engineers are MURRAY & PARTNERS, of the works, and MOUHEL AND PARTNERS.

Contract documents and Drawings may be obtained from the Joint Engineer, Municipal Offices, Cheltenham, on payment of a deposit of £10 by cheque made payable to the Board. The deposit will be returned if a bona-fide Tender is submitted and not subsequently withdrawn.

Tenders should be sent in a plain sealed envelope—endorsed "Tender for New Pumphouse and Intake—Tewkesbury," addressed to the CLERK, Cheltenham, and Gloucester Joint Water Board, P.O. Box No. 12, Municipal Offices, Cheltenham, to arrive not later than Midday on TUESDAY, 26th November, 1961.

The Board does not bind itself to accept the lowest or any Tender.

CONTRACTS

DERBYSHIRE COUNTY COUNCIL.

TENDERS FOR MOTOR FUEL, BURNING OIL, LUBRICATING OILS AND GREASES.

TENDERS are invited for the SUPPLY of MOTOR FUEL, BURNING OIL, LUBRICATING OILS and GREASES during the three years ending 31st March, 1965/66.

Forms of Tender from the County Surveyor. Tenders, in plain sealed envelopes, endorsed "Tender for Motor Fuel, etc., B. and H.," to the Clerk of the County Council, County Offices, Matlock, Derbyshire, by 15th NOVEMBER, 1961.

S. MEHEW,
County Surveyor.

County Offices,
Matlock.

COUNTY BOROUGH OF SOUTHAMPTON.

HIGHWAYS ACT, 1959.

CONTRACT NO. PSW87—LONGMORE AVENUE AND LONGMORE CRESCENT.

CONTRACT NO. PSW88—JUBILEE GARDENS.

CONTRACT NO. PSW90—MEAD CRESCENT, RAYNERS GARDENS AND PARKVILLE ROAD (PART).

TENDERS are invited for the ABOVE CONTRACTS, comprising the Making-up of Private Streets with Tarmacadam Carriageways, Concrete Kerbs and Channels, Surface Water Drainage, and Incidental works.

Applications for Contract documents to be made to the BOROUGH ENGINEER AND SURVEYOR, Civic Centre, Southampton, before 30th NOVEMBER, 1961. Documents will be forwarded thereafter for each Contract as and when ready.

Contractors will be informed of the closing dates for submitting completed Tenders for each Contract.

The Council do not bind themselves to accept the lowest or any Tender.

SOUTHAMPTON COUNTY BOROUGH.

TENDERS are invited for the SUPPLY of FIRE BRIGADE UNIFORM, SHOES, SHIRTS, COLLARS AND TIES, in accordance with Home Office Specifications.

Further particulars available from CHIEF OFFICER, Fire Brigade Headquarters, St. Mary's Road, Southampton.

Tenders, marked "Fire Brigade Uniform Tender," should be forwarded to reach the TOWN CLERK, Civic Centre, Southampton, by 12 Noon, 15th JANUARY, 1962.

FARNBOROUGH URBAN DISTRICT COUNCIL.

TO ROAD CONTRACTORS.

HIGHWAYS ACT, 1959.

MAKING-UP THAT LENGTH OF ROAD FROM FARNBOROUGH ROAD (A.325) TO CAMBRIDGE GARAGE, UNDER THE PRIVATE STREET WORKS CODE OF 1892.

TENDERS are invited for the CONSTRUCTION of approx. 300 sq. yd. of TARMACADAM CARRIAGeway. Taking-up and Re-laying 62 lin. yd. of Kerbing, the Construction of 125 sq. yd. of Tarmacadam Footway, and ancillary works, both inside and outside the above PRIVATE STREET.

Specifications, Bills of Quantities and Forms of Tender for this Contract can be obtained from the Council's Engineer and Surveyor, Municipal Offices, Farnborough, Hants, where Plans may be inspected during normal office hours.

Specified Tenders in the envelope provided, endorsed "Tender for Road to Cambridge Garage," to be received not later than 12 Noon on THURSDAY, 30th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

D. STUART JONES,
Clerk of the Council.

Town Hall,
Farnborough,
Hants.

ORRELL URBAN DISTRICT COUNCIL.

ALTERATIONS TO COUNCIL YARD.

FIXED-PRICE TENDER.

FIXED-PRICE TENDERS are invited for the ABOVE WORKS.

The work consists of Taking Down existing Framed Buildings, Erecting new Brick Garage and Messrooms, and Surfacing of Yard.

Copies of Specification, Bill of Quantities may be obtained from, and Plans and General Conditions of Contract, inspected in the Office of the Engineer and Surveyor, Council Offices, Orrell Park, near Wigan.

Tenders, in plain sealed envelopes, endorsed "Garage, Etc.," addressed to the undersigned, to be received not later than 12 Noon on MONDAY, 20th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

P. ASHURST,
Clerk to the Council.

Council Offices,
Orrell Park,
Near Wigan.
27th October, 1961.

MID-GLAMORGAN WATER BOARD.

MIDDLE LEVEL SERVICE RESERVOIR.

COURT COLMAN, NEAR BRIDGEND.

TENDERS are invited from suitably experienced contractors for the CONSTRUCTION of a 3 million-gallon capacity MASS CONCRETE SERVICE RESERVOIR, with Reinforced Concrete Roof, together with the Construction of Valve House, certain auxiliary Reinforced Concrete Chambers, and other ancillary works.

Tender documents may be obtained from the Board's Consulting Engineers, MESSRS. THOMAS AND MORGAN AND PARTNERS, 23 Gellifawdd Road, Pontypridd, on payment of a deposit of £5 5s. which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all documents.

Drawings may be inspected at the Offices of the Board, or those of the Consulting Engineers, at any time during normal office hours.

Tenders, in plain sealed envelope endorsed "Middle Level Service Reservoir," are to be delivered to the undersigned not later than Noon on WEDNESDAY, 6th December, 1961.

The Board do not bind themselves to accept the lowest or any Tender.

C. BAKER,
Clerk of the Board.

Mid-Glamorgan Water Board,
8 Wyndham Street,
Bridgend.

SUPPLEMENT

THE CONTRACT JOURNAL

CONTRACTS

HOLLAND (LINCS.) COUNTY COUNCIL.

RECONSTRUCTION OF SHARPE'S BRIDGE, TYDD ST. MARY—ROUTE C.128.

TENDERS are invited for the RECONSTRUCTION of SHARPE'S BRIDGE and Approach Roads.

The Contract provides for the Construction of a Three-span Bridge, 100 ft. 0 in. long, with Abutments and Piers, and 360 yd. of new Carriageway.

Contract documents obtainable from the County Surveyor, County Hall, Boston, upon payment of £2, repayable on receipt of a bona-fide Tender.

Tenders, in sealed endorsed envelopes, must reach the undersigned not later than 12 Noon on the 11th DECEMBER, 1961.

H. A. H. WALTER,
Clerk of the Council.

COUNTY BOROUGH OF BIRKENHEAD.

FIRE AND AMBULANCE SERVICES.

TENDERS are invited for the SUPPLY of the FOLLOWING:

AMBULANCE SERVICE:
2 Ambulances—Diesel.
1 Sitting Case Dual Purpose Vehicle—
Diesel.

Fire Service:
Uniform, Clothing, Fire Extinguishers, Rehills and Hose Reels for the 12 months ending 31st March, 1962.

Forms of Tender may be obtained from the CHIEF OFFICER, Fire Brigade Headquarters, Whetstone Lane, Birkenhead.

Closing date for all above Tenders—27th NOVEMBER, 1961.

BOROUGH OF SUTTON COLDFIELD.

FIXED-PRICED TENDERS are invited for the IMPROVEMENT WORKS of the road known as SPRINGFIELD ROAD.

The works comprise 3,600 sq. yd. of Bituminous Macadam Surfacing to Carriageway, 1,000 lin. yd. of Kerbs, Channels, Footpath, and ancillary Drainage.

The Scheme includes Completion Works on the adjacent Falcon Lodge Housing Estate, mainly comprising 1,800 sq. yd. of Bituminous Macadam Surfacing to Carriageways, and 700 lin. yd. of Kerbs, Channels, Footpath and Verge Works.

Tender documents may be obtained from the Borough Engineer on payment of £2 deposit, repayable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders should be sent to the undersigned by First Post on WEDNESDAY, 22nd November, 1961, in a plain sealed envelope endorsed "Springfield Road Improvement."

J. P. HOLDEN,
Town Clerk.

Council House,
Sutton Coldfield.

17th October, 1961.

BISHOP'S STORTFORD URBAN DISTRICT COUNCIL.

TENDERS are invited for the SUPPLY and DELIVERY of the UNDERMENTIONED ITEMS:

350 Reinforced Concrete Fencing Posts, 5ft. 3in. x 4in. x 4in., tapering to 3in. x 3in., reinforced to B.S.S. post holes for three wires.

50 5ft. 3in. x 4in. Straining Posts for Ditto 1-way strutting.

25 5ft. 3in. x 4in. x 4in. Ditto (1-way strutting).

200 2in. x 3in. Struts for above.

Tenders, endorsed "Tender for Fencing, Etc." should be submitted to the undersigned not later than 14th NOVEMBER, 1961.

A. N. BULLOUGH,
Clerk of the Council.

The Council House,
Causway,
Bishop's Stortford.

FAILSWORTH URBAN DISTRICT COUNCIL.

BRIERLEY AVENUE ESTATE.

ROADS AND SEWERS (SECOND EXTENSION).

TENDERS are invited from experienced contractors for the CONSTRUCTION of approx. 950 lin. yd. of SEWERS from 6in. to 18in. dia. and 3,081 super. yd. of Roadworks, and other incidental works.

Conditions of Contract, Specification and Bills of Quantities may be obtained from the Engineer and Surveyor, Town Hall, Failsworth, on receipt of a deposit of £2 5s. which will be refunded on receipt of a bona-fide Tender and return of all the documents. Drawings may be inspected at the above address during normal office hours.

Tenders, in a plain sealed envelope endorsed "Tenders for Brierley Avenue Roads and Sewers—Second Extension," must be received by the undersigned not later than 12 o'clock Noon on SATURDAY, 2nd December, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

JOHN WALTON,
Clerk of the Council.

Town Hall,
Failsworth.

24th October, 1961.

BATHAVON RURAL DISTRICT COUNCIL.

PEASEDOWN ST. JOHN SEWERAGE EXTENSIONS.

CONTRACT NO. 4A.

The Council invite TENDERS from experienced public contractors for the CONSTRUCTION of approx. 780 lin. yd. of 6in. SPUN CONCRETE PIPE SEWER, together with Concrete Tube Manholes, and other incidental works.

The Drawings can be inspected at the Offices of the Engineers, MESSRS. WILLCOX, RAIKES AND MARSHALL, 33 Great Charles Street, Birmingham 3, from whom may be obtained the General Plan, Conditions of Contract and Specification. Bills of Quantities and Form of Tender may be obtained on or after the 6th November, 1961, on receipt by them of a cheque drawn in favour of the Council, as a deposit of Five Guineas, which will be refunded on receipt of a bona-fide Tender, supported by a priced Bill of Quantities (if asked for), and the return of all documents.

Tenders, on the form required, together with particulars of experience, must be delivered in the plain sealed envelope provided, endorsed "Peasedown St. John Sewerage Extensions—Contract No. 4A," to the undersigned not later than 12 o'clock Noon on MONDAY, 4th December, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

S. G. FOXTON PRICE,
Clerk of the Council.

Council Offices,
Westgate Buildings,
Bath.

CONTRACTS

CONTRACTS

HEREFORDSHIRE COUNTY COUNCIL.

NEWPORT-SHREWSBURY TRUNK ROAD.

IMPROVEMENT BETWEEN WORMBRIDGE AND HIGHFIELD (BOAR'S HILL), A.465.

TENDERS are invited for the ABOVE IMPROVEMENT, which involves Earthworks, Draining, and Carriageway Construction in Crushed Stone, Tarred and Bitumen Macadam on a length of One Mile of the Trunk Road between Hereford and Pontsticill.

The Contract documents and a Location Plan may be obtained from the Office of the County Surveyor, Pontsticill House, Hereford, payment of a deposit of Five Guineas made payable to the Herefordshire County Council. This deposit will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and on the return of the Contract documents and Plan.

The Contract Drawings may be inspected by persons tendering, at the above address, during normal office hours (Monday-Friday).

Tenders, in sealed envelopes having no mark thereon indicating the sender, are to be delivered to the undersigned not later than Noon on MONDAY, 27th November, 1961.

R. C. HANSEN,
Clerk of the County Council.

Shirehall,
Hereford.

COUNTY BOROUGH OF BLACKPOOL.

NEW WEIGHBRIDGE.

TENDERS (by 2.30 p.m., 24th NOVEMBER, 1961) are invited for the SUPPLY of NEW WEIGHBRIDGE at LAYTON HIGHWAYS DEPOT.

Brief Specification and Form of Tender obtainable from ARTHUR HAMILTON, B.Sc., Borough Surveyor, P.O. Box 17, Municipal Buildings, Blackpool.

COUNTY BOROUGH OF SOUTHPORT.

STAVELEY ROAD HOUSING SITE—EXTENSION NO. III.

TENDERS are invited for the CONSTRUCTION of approx. 1,000 lin. yd. of 15in., 12in., and 9in. dia. CONCRETE SEWERS together with ancillary works, for the ABOVE SITE.

Specification, Bill of Quantities and Form of Tender may be obtained from the BOROUGH ENGINEER, Town Hall, Southport, and applications must be accompanied by a deposit of £2 2s. which will be refunded on receipt of a bona-fide Tender. Plans and General Conditions of Contract may be inspected at the Borough Engineer's Office during normal office hours.

Tenders by First Post on the 18th NOVEMBER.

NORTHWICH URBAN DISTRICT COUNCIL.

ROADWORKS AND DRAINAGE WORKS OFF LONDON ROAD, NORTHWICH.

TENDERS are invited for the CONSTRUCTION of ROADS and DRAINAGE WORKS off London Road, Northwich, including approx. 3,500 cu. yd. of Excavation, 2,500 sq. yd. of Ashes, Hardcore, Macadam and Surface Dressing, 640 lin. yd. of 6in. x 10in. Kerb, 450 lin. yd. of 6in. dia. S.G.W. Pipes, together with all necessary ancillary works.

Conditions of Contract, Specification of Workmanship and Materials, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, The Council House, Northwich, during normal office hours.

Tenders, in plain sealed envelopes endorsed "Roadworks, Etc., Northwich," Contract No. 512," but bearing no mark or indication of the sender's name, should be delivered to the undersigned not later than Noon on the 13th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

H. D. HOCKING,
Clerk of the Council.

The Council House,
Northwich.

SUTTON-IN-ASHFIELD URBAN DISTRICT COUNCIL.

BOWLING GREEN—LAWN PLEASURE GROUNDS.

FIXED-PRICE TENDERS are invited by the above-named Council for the CONSTRUCTION of a NEW BOWLING GREEN at the Lawn Pleasure Grounds, Sutton-in-Ashfield.

The works include the Regrading of approx. 2,700 cu. yd. of Material, the Laying of approx. 600 lin. yd. of Land Drains, and appurtenant works such as Seeding, etc.

Tender documents may be obtained from the Engineer and Surveyor, Forest Lodge, Station Road, Sutton-in-Ashfield.

The completed Tenders, in plain sealed envelopes showing no name or mark indicating the sender, and endorsed "Bowling Green," to be delivered to the undersigned at the address below not later than 12 Noon on SATURDAY, 16th December, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

WALTER LAUGHTON,
Clerk of the Council.

Barclays Bank Chambers,
Long Street,
Sutton-in-Ashfield.

23rd October, 1961.

NORTH DEVON WATER BOARD.

CONTRACT NO. 63A.

CONSTRUCTION OF BRATTON FLEMING BOOSTER PUMPHOUSE.

TENDERS are invited for the CONSTRUCTION of a BOOSTER PUMPHOUSE in Brickwork and Tiled Roof with Internal, with Lean-to Garage, and Detached Fuel Tank Housing, at the Treatment Works at Bratton Fleming, near Barnstaple.

Copies of the Specification, Bill of Quantities, Form of Tender and Drawings may be obtained from the Engineers, MESSRS. ROLFE, RAFFERTY & CO., 100 Greenwich, London E.1, Westminister, London S.W.1, and payment (by cheque only) of Two Guineas which will be repaid upon the receipt of a bona-fide Tender and the return of all documents and drawings supplied.

The Contract Drawings may be inspected at the Office of the Engineers, at the Office of the Chief Engineer, North, North Devon Water Board, Grenville House, Buntingford Street, Barnstaple.

Tenders, in plain sealed envelope endorsed "Tender for Contract No. 63A," to be sent to the undersigned not later than 12 Noon on 24th NOVEMBER, 1961.

The Board does not bind itself to accept the lowest or any Tender.

R. T. SHEARS,
Clerk to the Board.

4 Barnfield Crescent,
Exeter.

24th October, 1961.

CONTRACTS

WEST SUSSEX COUNTY COUNCIL.
COUNTY ROADS.

ANNUAL CONTRACTS. 1962/63.

Contractors who wish to be invited to TENDER in respect of the year ending 31st March, 1963, for the FOLLOWING are requested to apply to the County Surveyor, County Hall, Chichester, within two weeks of the appearance of this advertisement. Invitations to tender will be dispatched before 31st December, 1961:

NATURE OF CONTRACT:

Supply and Delivery of: Tared and Bituminous Macadam (Stone, Slag and Gravel); Cold Bituminous Carpeting, Gravel, Sand, Flints, Sussex Stone, Concrete Kerbs and Paving Slabs; Concrete Pipes; Iron Castings; Ready-Mixed Concrete; Daywork Haulage and Tractor Grass Mowing; Hire of Road Rollers; Hire of other Roadmaking Plant; Haulage of Plastic Materials; Laying Plastic White Lines; Mechanical Laying of Road Surfaces by Barber-Greene Machine, including Supply of Materials; Bituminous Macadam, Bituminous Carpeting, Tarmacadam Base Coat.

F. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.

BEDFORDSHIRE COUNTY COUNCIL.
LONDON-YORKSHIRE MOTORWAY, M.1.

TENDERS are invited for the ERECTION of 4,000ft. of FLEXBEAM GUARD RAIL on the Bridge Approaches, on the M.1. in Bedfordshire. Copies of the Conditions of Contract, Specification and Bills of Quantities can be obtained from the County Surveyor, Dents Road, Bedford, on payment of Two Pounds deposit which will be refunded on receipt of a bona-fide Tender.

Tenders must be returned to me by FRIDAY, 24th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender which may be received.

GEORGE BREWIS,
Clerk of the County Council.

Shire Hall,
Bedford.

October, 1961.

BOROUGH OF CHELMSFORD.
RESURFACING RAINSFORD LANE, CHELMSFORD.

TENDERS are invited for the RESURFACING of RAINSFORD LANE from Crampford Road to Andrews Place (South).

The work comprises Regulating the existing Carriageway Surface and a Widened Section of Carriageway with Bituminous Concrete and Surfacing the complete Carriageway with Cold Asphalt and Precoated Chippings.

Tender documents may be obtained from the Borough Engineer and Surveyor, Municipal Offices, Coval Lane, Chelmsford, upon payment of a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all Tender documents.

Tenders must be received by the undersigned not later than 12 Noon on MONDAY, 27th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

B. A. FRANCIS,
Town Clerk.

Municipal Offices,
Coval Lane,
Chelmsford, Essex.

CITY OF BRADFORD.
SHEARBRIDGE ROAD DEPOT, BRADFORD.

D—GENERAL CONTRACT FOR THE CONSTRUCTION OF A SINGLE-STOREY GARAGE BUILDING APPROX. 217FT. BY 160FT.

TENDERS are invited for the CONSTRUCTION of the ABOVE BUILDING, consisting of Brick Panel Walls, Insulated Asbestos Roof and Electrically Heated R. & F. Fins, etc. The Foundations and Steel Framework of the building, including certain ancillary works, are already under construction and are not included in this Contract.

Full particulars and Forms of Tender and Specification may be obtained from the City Engineer and Surveyor, upon deposit of Two Guineas.

Tenders should be delivered in the envelopes provided, to reach the undersigned not later than 12 Noon, 15th NOVEMBER, 1961.

The deposit is returnable on receipt of a bona-fide Tender not subsequently withdrawn.

HENRY PATTEN,
Town Clerk.

Town Hall,
Bradford, 1.

SEAHAM URBAN DISTRICT COUNCIL.
ROOFING.

TENDERS are invited for the SUPPLY and ERECTION of TRUSSES and ROOF COVERING to what will be a Garage Building approx. 100ft. long x 64ft. wide. The Trusses will bear on Stanchions at approx. 11ft. centres; roof covering will be made for roof lighting and, if necessary, insulation.

The building may be inspected by appointment.

Inquiries to the Engineer and Surveyor, Cliff House, Seaham.

F. A. ALDERSON,
Clerk of the Council.

Seaham,
19th October, 1961.

THE NORTHWICH RURAL DISTRICT COUNCIL.
PROPOSED SEWAGE DISPOSAL WORKS EXTENSION—TENDERS.

The above Council invite TENDERS for the CONSTRUCTION of One SETTLING TANK, One FILTER, One BUMUL TANK, Four SLUDGE DRYING BEDS, and other works to extend the existing SEWAGE TREATMENT WORKS at UTKINTON, near Tarporley.

Copies of the Specification, Bills of Quantities and Form of Tender may be obtained from the Offices of the Engineer and Surveyor, Whitehall, Hartford, Northwich, where the Drawings may be inspected upon payment of Two Guineas which will be refunded upon receipt of a bona-fide Tender not subsequently withdrawn, and return of all documents.

Tenders must be returned in the envelope enclosed with the Tender documents, and must bear no name or mark indicating the sender, and must be delivered not later than 10 a.m. on THURSDAY, the 23rd November, 1961, to the CLERK OF THE COUNCIL, Whitehall, Hartford, Northwich, Cheshire.

CONTRACTS

COUNTY BOROUGH OF WALSALL.
HOUSING COMMITTEE.

ERECTION OF 120 FLATS.

LOWER FARM ESTATE, PHASE II.

FIXED-PRICE TENDERS are invited for the ERECTION of One SIX-STORY BLOCK of 48 FLATS in Precast C.R.C. Crosswall construction, Eight THREE-STORY BLOCKS of FLATS and a BLOCK of SIX THREE-STORY SHOPS and MAISONNETTES in load-bearing concrete cross-wall construction.

Tenders must be sent in a sealed envelope addressed to the TOWN CLERK and bearing the words "Tender for Lower Farm Estate, Phase II" so as to be received not later than Midday on FRIDAY, the 1st of December, 1961. Any Tender received after the time stated or otherwise sent in an envelope endorsed as required may be rejected.

An envelope suitably addressed and endorsed will be supplied with the Form of Tender, and it is desired that this envelope be used.

The Council do not bind themselves to accept the lowest or any Tender.

M. E. HABERSON,
Borough Engineer and Surveyor.

Council House,
24th October, 1961.

METROPOLITAN BOROUGH OF HAMPSTEAD.

Contractors wishing to TENDER for the SUPPLY and INSTALLATION of FILTRATION PLANT at the SWIMMING BATHS which may be erected by the HAMPSTEAD BOROUGH COUNCIL at SWISS COTTAGE, HAMPSTEAD (at an estimated total cost of £100,000), are invited to send their names to me by the 10th NOVEMBER, 1961, with a statement of similar works previously carried out.

Tenders will be selected entirely at the Council's discretion, and the Council reserve the right to add others at any time.

At a time to be appointed by the Council, and upon payment of a deposit of £52 10s., selected tenderers will receive a copy of the Tender, Specification and other relevant documents. The deposit will be returned to contractors submitting a bona-fide Tender not subsequently withdrawn.

B. H. WILSON,
Town Clerk.

Town Hall,
Haverstock Hill,
Hampstead, N.W.3.

BOROUGH OF OLDBURY.

MAKING UP AND CARRIAGeway SURFACING AT LION FARM ESTATE AND KINGSWAY EAST—CONTRACT NO. 61/13.

TENDERS are invited, on a fixed-price basis, for the PROVISION and LAYING of approx. 680 tons of Bituminous Macadam and approx. 2,350 sq. yds. of Hot Rolled Asphalt and Dense Tar Surfacing at THE ABOYNE together with various ancillary works.

Copies of the General Conditions of Contract and Drawings may be inspected at the office of the Borough Engineer and Surveyor, Municipal Bank Chambers, Oldbury, from whom copies of the Bills of Quantities, Specification, Form of Tender and Conditions of Tender may be obtained on payment of £2 2s. (cheques made payable to the Borough of Oldbury) which will be refunded following the receipt of a bona-fide Tender not subsequently withdrawn. Tenders are to be delivered to the undersigned in the envelope provided, which should bear no name or mark indicating the sender, not later than Noon on THURSDAY the 16th November, 1961.

The Corporation does not bind itself to accept the lowest or any Tender.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings,
Oldbury,
Near Birmingham.
October, 1961.

DODWORTH URBAN DISTRICT COUNCIL.
HOUSING AT GILROY—EASTERN SECTION—PHASE II.

The above Scheme, which has been designed by the Council's Architects, MESSRS. TURNER & BENSON, of Manchester, consists of 111 Dwellings, 4 Shops with Maisonettes, Communal Rooms and Wardens House and Laundry, together with Road and Sewer Works and Site Works.

The Council invite any contractor who has had experience of building works of this nature to apply for permission to submit a Tender for the work.

Applications should state size and location of previous housing schemes for Local Authorities, and should state the name of the Architect responsible for such schemes, and to whom reference may be made.

Applications should be forwarded so as to be received by the CLERK OF THE COUNCIL, Council Offices, Dodworth, near Barnsley, not later than 12 Noon on MONDAY, the 13th November, next.

EAST ANGLIAN REGIONAL HOSPITAL BOARD.

CONTRACTS FOR ENGINEERING SERVICES.

The Board invite applications for inclusion in their approved list of contractors for hospital engineering services in the East Anglian Region (Cambridgeshire, Isle of Ely, Norfolk, Huntingdonshire, East and West Suffolk, Soke of Peterborough, and parts of South Lincolnshire and North Essex).

Applications for further details from the Board's ENGINEER, Anstey Hall, Trumpington, Cambridge, by 1st NOVEMBER, 1961.

Firms already on the list need not reapply unless they wish to amend the class of work, cost range and/or area of operation for which they are already included.

BOLTON AND DISTRICT JOINT SEWERAGE BOARD.

TENDERS are invited for the SINKING of 23 TRIAL BOREHOLES on the Site of the RINGLEY FOLD SEWAGE TREATMENT WORKS.

Applications for further details from the Engineer to the Board, Town Hall, Bolton, on payment of a deposit of Five Guineas, refundable only to contractors who submit bona-fide Tenders.

Tenders must be returned, in the envelopes provided, and delivered to the Office of the ENGINEER TO THE BOARD, by 10 a.m., MONDAY, 20th November, 1961.

CONTRACTS

HAMPSHIRE COUNTY COUNCIL.
COUNTY ROADS AND BRIDGES DEPARTMENT.

TRUNK ROAD, A.30—BOROUGH OF BASINGSTOKE.
IMPROVEMENT AT KEMPSTOTT HILL.

TENDERS are invited for WIDENING the existing CARRIAGeway, to 33ft., between Homesteads Road and the Blue Hut Cafe (approx. 1.550yd.), and the PROVISION of a SHORT LENGTH of DUAL CARRIAGeway at the Junction with KEMPSTOTT Lane.

The works include Excavation, Surface Water Drainage, Carrageway Construction in Gravel, Lean-Mix Concrete and Bitumen Macadam, and ancillary works.

Applications for particulars should reach the undersigned by 16th NOVEMBER, 1961.

The Contract will not include a Price Variation Clause.

The Council do not undertake to accept the lowest or any Tender.

H. N. JENNER,
County Surveyor.

BOROUGH OF ALTRINCHAM.
SITEWORKS FOR GARAGES.

MOSSFIELD ROAD, BROOMWOOD ESTATE.

TENDERS are invited from contractors experienced in similar work for SITEWORKS, comprising Kerbing, Drainage, Foundations, Water Services, Surfacing, and Concrete Bases for Garages.

General Conditions, Specification, Bill of Quantities and Form of Tender can be obtained from, and Plan inspected at, the Borough Surveyor's Department, Town Hall, Altrincham.

Tenders to be returned to the undersigned, in a plain sealed envelope, not later than MONDAY, 20th November, 1961.

The Council does not bind itself to accept the lowest or any Tender.

E. GRAHAM THOMAS,
Town Clerk.

Town Hall,
Altrincham.

November, 1961.

SHOREHAM-BY-SEA URBAN DISTRICT COUNCIL.

TENDERS FOR SUPPLY OF ONE 5CWT. VAN.

TENDERS are invited for the SUPPLY of One Scwt. PETROL-ENGINEED VAN and for taking One Second-hand Scwt. VAN in PART EXCHANGE.

Further details and terms of Tender can be obtained from the Surveyor to the Council, St. Wilfrid's, Ham Road, Shoreham-by-Sea, and completed Tenders should be delivered to the undersigned in a plain sealed envelope endorsed "Scwt. Van" not later than 9 a.m. on MONDAY, 27th November, 1961.

The Council do not undertake to accept the lowest or any Tender.

R. H. DAVIES,
Clerk of the Council.

Town Hall,
Shoreham-by-Sea.

27th October, 1961.

IRLAM URBAN DISTRICT COUNCIL.
PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of SCHOOL LANE, CADISHHEAD. Plans and Conditions of Contract may be seen, and Specifications, Bill of Quantities and Form of Tender, obtained from the Engineer and Surveyor, Council Offices, Irlam, Lancs., upon payment of a deposit of One Pound, returnable upon receipt of a bona-fide Tender and the return of all documents.

Soldiers' tenders, in the envelopes provided, must reach the CLERK OF THE COUNCIL, Council Offices, Irlam, not later than FRIDAY, 1st December, 1961. The Council do not bind themselves to accept the lowest or any Tender.

WEST KESTEVEN RURAL DISTRICT COUNCIL.

ANCASTER SEWERAGE AND SEWAGE DISPOSAL.

TENDERS are invited from experienced civil engineering contractors for the LAYING of about 2,000 yds. of 9in. PIPE SEWERS, comprising Settlement Tank, Bacterial Filter 56ft. dia., Humus Tank, Sludge Drying Beds and Pumping Station, etc., at ANCASTER, about eight miles north of GRANTHAM.

Plans, Specification and Bills of Quantities may be seen at the offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, and copies of the Quantities and Form of Tender may be obtained from them on deposit of Five Guineas (by cheque payable to the West Kesteven R.D.C.), which will be refunded on receipt of a bona-fide Tender not afterwards withdrawn, and return of all documents loaned to the contractor within seven days of notice informing him that a Tender has been accepted.

Tenders, in plain sealed envelopes endorsed "Ancaster Sewerage" to be delivered to me at Sandon Close, Grantham, not later than the First Post on FRIDAY, 25th November, 1961. The lowest or any Tender will not necessarily be accepted.

Acceptance of the Tender will be subject to the final approval of the Ministry of Housing and Local Government. Work to be commenced immediately such approval is received.

J. R. MORGAN,
Clerk of the Council.

ATCHAM RURAL DISTRICT COUNCIL.

PIMHILL AND EAST ATCHAM WATER SUPPLY.

CONSTRUCTION OF TWO 200,000-GALLON SERVICE RESERVOIRS.

TENDERS are invited from contractors experienced in the type of work concerned, for the CONSTRUCTION of 200,000-GALLON REINFORCED CONCRETE COVERED SERVICE RESERVOIRS, and ancillary works, at Pimhill and at Haughtmond Hill.

Further details and terms of Tender can be obtained from the Offices of J. R. SOCKETT, M.B.E., M.I.Mun., Engineer and Surveyor to the Council, 24 St. John's Hill, Shrewsbury.

Applications for Tender documents must be accompanied by a deposit of £2 which will be returned on receipt of a bona-fide Tender not later than Noon on FRIDAY, 25th November, 1961.

The Council does not bind itself to accept the lowest or any Tender.

W. T. BROWN,
Clerk of the Council.

Council Offices,

24 St. John's Hill,

Shrewsbury.

CONTRACTS

KENT COUNTY COUNCIL

TENDERS are invited for the CONSTRUCTION of PLAYING FIELDS at the ST. JOHN FISHER R.C. SCHOOL site, ORDNANCE STREET, CHATHAM, Kent, the work consists of:

- (1) Excavations involving the Movement of approx. 12,500 cu. yd. of Earth.
- (2) Site and Erection of approx. 500 lin. yd. of 6ft. high Chain Link Fencing.
- (3) Construction of approx. 1,124 super. yd. of Brick-faced 9in. Reinforced Concrete Retaining Wall, maximum height 16ft.
- (4) Construction of approx. 5,000 super. yd. of 6ft. Redgrit Surfacing and ancillary works of Grass Sowing, Turfing, Drainage and Ramps.

Contractors may be required to furnish references as to similar work previously undertaken.

The County Council does not bind itself to accept the lowest of any Tender. It also reserves the right to accept from any of the applicants a short list of firms to be invited to Tender.

Applications to be made to the COUNTY ESTATES OFFICER, Springfield, Maidstone, by not later than the 10th NOVEMBER, 1961. Copies of the Plan can be inspected if so desired at the above mentioned Offices between the hours of 8.45 a.m. to 5.35 p.m. daily, except Saturdays.

LINDSEY COUNTY COUNCIL

SHEFFIELD-GRIMSBY TRUNK ROAD, A.18.

IMPROVEMENT OF THE APPROACHES TO THE KEEADY TRENT BRIDGE.

TENDERS are invited for the REALIGNING, WIDENINGS and REGRADEING of the TRUNK ROAD for a total distance of approx. 800 lin. yd. The work comprises: Inter alia:

- (1) The Lengthening of the Trunk Road approx. 5ft. at the Railway Bridge and Level Crossing, on the Western Approach.
- (2) Improvement of Junction with Road B.1450 including Column and Bollard Lighting.
- (3) 4,800 sq. yd. new Carriageway (Dense Tar and Surface) 3,500 sq. yd. Tarmacadam Footpath, 6,000 cu. yd. Excavation.
- (4) Fencing, Surface Water Drainage, Kerbing and Bus Draw-ins.

Tender documents may be obtained from the COUNTY SURVEYOR, County Offices, Newland, Lincoln, on payment of a deposit of 25s. (cheques payable to Lindsey County Council), which deposit will be returned on receipt of a bona-fide Tender.

The drawings may be inspected, by appointment, at the above address or at the offices of the Divisional Road Engineer, Ministry of Transport, Block 6, Government Buildings, Chafford Drive, Nottingham, divisional headquarters, Nottingham.

Tenders, in sealed envelopes, without any marks indicating the sender, are to be delivered to the County Surveyor, County Offices, Lincoln, not later than 10 a.m. on WEDNESDAY, 29th November, 1961.

The County Council do not bind themselves to accept the lowest or any Tender and the acceptance will be subject to the approval of the Ministry of Transport.

County Offices,
Newland,
Lincoln.

BOROUGH OF REIGATE

ONE BLOCK OF SIX ONE-BEDROOM FLATS AND SIX STORES, "TAISBORG," LONDON ROAD, REIGATE.

FIXED PRICE TENDERS are invited for One Block of SIX ONE-BEDROOM FLATS, 600 sq. yd. and Six STORES at "TAISBORG," LONDON ROAD, Reigate, based upon Bills of Quantities for sub-structure and site works, subject to remeasurement as work proceeds, and upon lump sum for super-structure of the dwellings based upon Specification and detailed drawings.

Form of Tender, Specification, Bills of Quantities and Plans obtainable from the Borough Engineer and Surveyor, Town Hall, Reigate, on payment of a deposit of £2 2s. refunded upon the submission of a bona-fide Tender or the return of all plans and documents.

Sealed Tenders, in the envelope provided and endorsed "Tenders for Six Flats and Six Stores, 'Taisborg,' London Road, Reigate" must be returned to the undersigned not later than Noon on THURSDAY, 23rd November, 1961.

HEBER DAVIES,
Town Clerk.

Town Hall,
Reigate.
October, 1961.

URBAN DISTRICT COUNCIL OF BASILDON.

GROUP "B" STREET LIGHTING.

TENDERS will shortly be invited for SUPPLY, DELIVERY and ERECTION of 178 CLASS "B" TUNGSTEN LAMPS on Concrete Columns. Experienced contractors should apply to ENGINEER AND SURVEYOR, 88 Town Square, Basildon, Essex, by 10th NOVEMBER.

CATERHAM AND WARLINGHAM URBAN DISTRICT COUNCIL.

EXTENSION TO VEHICLE REPAIR SHOPS—CHALDON ROAD DEPOT, CATERHAM.

TENDERS are invited for the ERECTION of a BRICK EXTENSION to the Vehicle Repair Shops, approx. 8ft. x 20ft. x 12ft. to eaves.

Form of Tender, Specification and Plan can be obtained on application to the Engineer and Surveyor, and Tenders, in the endorsed envelope provided, must be submitted to the undersigned not later than Noon on the 5th DECEMBER, 1961.

B. J. SMERDON,
Clerk of the Council.

FRIERN BARNET URBAN DISTRICT COUNCIL.

RELIEF SURFACE WATER SEWER.

TENDERS are invited for the CONSTRUCTION of approx. 545yd. of 9in. to 36in. REINFORCED CONCRETE PIPE SEWERS, together with necessary Manholes, at BETHUNE RECREATION GROUND, Beaconsfield Road, N.11.

Drawings may be seen at, and Tender documents obtained from, the Office of the Engineer and Surveyor, Town Hall, Friern Barnet, N.11.

Tenders, in the envelope provided, bearing no indication of the sender's name, are to be delivered to the undersigned not later than Noon on THURSDAY, 30th November, 1961.

R. S. CLOTHIER,
Clerk of the Council.

CONTRACTS

CONTRACTS

NORTH RIDING OF YORKSHIRE COUNTY COUNCIL.

BOROUGHBRIDGE BY-PASS, TRUNK ROAD A.1.

TENDERS are invited for SUPPLYING and ERECTING FABRICATED STEELWORK in the Superstructure of the Bridge across the RIVER URE, 104ft. long with Welded Steel Main Girder up to 104ft. long. The contract documents may be obtained from the COUNTY SURVEYOR, County Hall, Northallerton, Yorkshire, on payment of a deposit of £5 which will be refunded if a bona-fide Tender is submitted or the documents are returned before the closing date (14th DECEMBER, 1961).

EAST SUFFOLK COUNTY COUNCIL.

TENDERS are invited for HEATING and PLANING approx. 50,000 sq. yd.: BITUMINOUS CAPPING approx. 14,000 sq. yd.: BALANCING and SURFACING with ASPHALT approx. 10,500 sq. yd. HALESWORTH, BECCLES ST. OLAVES, FRAMLINGHAM, WOODBRIDGE. (Contract No. 49.) Documents from COUNTY SURVEYOR, County Hall, Ipswich.

BEDFORDSHIRE COUNTY COUNCIL EDUCATION COMMITTEE.

COLLEGE OF FURTHER EDUCATION, KINGSWAY, DUNSTABLE.

TENDERS are invited for the CLEANING OF WINDOWS at the ABOVE COLLEGE during Christmas holidays, 1961, and Easter holidays, 1962. The window area is 10,000 sq. ft., which includes the four-storey block.

The lowest or any Tender will not necessarily be accepted.

Further particulars from the undersigned, to whom Tenders should be returned by 22nd NOVEMBER, 1961.

T. S. LUCKING,
Director of Education.

Shire Hall,
Bedford.

BOROUGH OF ILFORD.

SITE DEVELOPMENT WORKS—LAND BETWEEN FULFILL AVENUE AND THE GLADE—STAGE II.

The CORPORATION invite TENDERS for COMPLETION WORKS to this Housing Development, comprising approx. 2,860 lin. yd. of Precast Concrete, 4,000 sq. yd. of Precast Concrete Flagging to Footpath and the Paving 5,300 sq. yd. Special Areas in Precast Concrete Flagging, Precast Exposed Aggregate Paving and Cobblestones, together with Drainage and all ancillary works.

Conditions of Contract and Drawings may be inspected upon application to the Borough Engineer, Town Hall, Ilford, from whom the Specification, Bills of Quantities and Form of Tender may be obtained, on payment of a deposit of Two Guineas which is returnable upon receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, sealed in an envelope which will be provided, but bearing no name or mark indicating the sender, must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on the 21st NOVEMBER, 1961.

BOROUGH OF ILFORD.

SITE COMPLETION WORKS AT GREEN LANE AND INGLEHURST GARDENS.

The CORPORATION invites TENDERS for these WORKS, involving the Laying of approx. 300 sq. yd. of Reinforced Concrete in two Lay-bys, and the Taking-up and Re-laying of approx. 400 sq. yd. of Paving, together with ancillary Edging, Kerbing, and Drainage Works.

Conditions of Contract and Drawings may be inspected upon application to the Borough Engineer, Town Hall, Ilford, from whom the Specification, Bills of Quantities and Form of Tender may be obtained, on payment of a deposit of Two Guineas which is returnable upon receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, sealed in an envelope which will be provided, but bearing no name or mark indicating the sender, must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on the 21st NOVEMBER, 1961.

CITY OF MANCHESTER.

TENDERS invited for LAYOUT of PLAYING FIELDS at ST. MARY'S ROAD PRIMARY SCHOOL, NEWTON HEATH.

Specification and Plan from the CITY ARCHITECT, P.O. Box 488, Town Hall.

Tenders returnable by 28th NOVEMBER.

FORMBY URBAN DISTRICT COUNCIL.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the period ending 31st December, 1962:

- (1) Bitumen Macadam.
- (2) Cold Asphalt.
- (3) Salt Glazed Ware Pipes.
- (4) Concrete Kerbs and Channels.
- (5) Office Coal and Coke.

Specifications and Forms of Tender can be obtained from the Engineer and Surveyor, Council Offices, Formby.

Tenders are to be delivered to the CLERK OF THE COUNCIL, Council Offices, Formby, near Liverpool, not later than 10 a.m. on SATURDAY, the 18th November, 1961, in plain sealed envelopes suitably endorsed "Tender for _____".

The Council do not bind themselves to accept the lowest or any Tender.

NORTHWICH URBAN DISTRICT COUNCIL.

ERECTION OF BRICK GARAGES.

TENDERS are invited for the ERECTION of Six Single GARAGES on the RUDHEATH, LEFTWICH and MANOR PARK Estates, and for a Block of 13 GARAGES and Two STORE BUILDINGS on the LEFTWICH Estate.

Form of Tender, Conditions of Contract, Specification and Drawings may be obtained from the Engineer and Surveyor, The Council House, Church Road, Northwich.

Tenders, in plain sealed envelopes, bearing no indication of the sender's identity, and endorsed "Brick Garages" must be delivered to the undersigned not later than 10 a.m. on MONDAY, 13th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

H. D. HOCKING,
Clerk of the Council.

The Council House,
Northwich.

CONTRACTS

BOROUGH OF POOLE.

CONTRACT NO. 7—BROADSTONE SEWAGE WORKS.

TENDERS are invited for the Stage III EXTENSIONS to this SEWAGE WORKS.

The work will comprise Construction of five Reinforced Concrete Sewage and Sludge Tanks, Sludge Drying Beds, Pipelines, Roadways, and associated works.

Tendering documents will be available from the Consulting Engineers, J. D. AND D. M. WATSON, M.M.I.C.E., 67 Tufton Street, London, S.W.1, early in November.

A deposit of £100, plus a cheque of Ten Guineas to be made payable to the Borough of Poole.

Tenders to be submitted to the undersigned not later than Noon on WEDNESDAY, 13th December, 1961.

J. G. HILLIER,
Town Clerk.

October, 1961.

BOROUGH OF POOLE.

BAITER SURFACE WATER PUMPING SCHEME.

TENDERS are invited for the CONSTRUCTION of a REINFORCED CONCRETE PUMPING STATION and 400yd. of 21in. Cast-iron Rising Main with Sea Outfall.

Documents available from Borough Engineer on deposit of Two Guineas.

Tenders to be submitted to the undersigned not later than Noon, 20th NOVEMBER, 1961.

J. G. HILLIER,
Town Clerk.

October, 1961.

BOROUGH OF LOUGHBOROUGH.

PAINTING OF FOOTBRIDGE OVER THE RIVER SOAR.

TENDERS are invited for the PREPARATION and PAINTING of an 80ft. span TUBULAR STEEL FOOTBRIDGE over the RIVER SOAR.

General Conditions of Contract may be inspected at, and the Specification, Bill of Quantities and Form of Tender may be obtained from, the Office of the undersigned on deposit of Two Guineas which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders shall be delivered to ARTHUR USHER, Town Clerk, Southfields, Loughborough, in a plain sealed envelope endorsed "Painting of Footbridge," not later than Noon on SATURDAY, 18th November, 1961.

The Corporation do not bind themselves to accept the lowest or any Tender.

JOHN S. BATES, A.M.I.C.E., M.I.Mun.E., A.M.T.P.I., Borough Engineer and Surveyor.

Southfields,
Loughborough.

27th October, 1961.

ODABY URBAN DISTRICT COUNCIL.

SEWERAGE WORKS.

TENDERS are invited from experienced contractors for the CONSTRUCTION of the FOLLOWING WORKS:

- (a) The Construction of a Reinforced Concrete Underground Pumping Station, including the Provision of the Pumping Equipment and ancillary works.
- (b) The Construction of 435yd. of 10in. dia. Cast-iron Rising Main.
- (c) The Construction of 175yd. of 9in. dia. Cast-iron Sewer.

Drawings may be inspected, and copies of the Conditions of Contract, Specification, Bills of Quantities and Form of Tender obtainable from the Engineers, Odaby, Firth, Odaby, Leicester, on payment of £3 3s. deposit which will be refunded on receipt of a bona-fide Tender.

Tenders, in the envelopes provided, are to be delivered to the undersigned not later than Noon on MONDAY, the 11th December, 1961.

D. EVAN DAVIES,
Clerk of the Council.

Municipal Offices,
Odaby Firth,
Odaby, Leics.

SOUTH CARDIGANSHIRE WATER BOARD.

CONTRACT NO. 24.

PENPARC SERVICE RESERVOIR.

TENDERS are invited from experienced contractors for the CONSTRUCTION of a REINFORCED CONCRETE COVERED SERVICE RESERVOIR, with Earthen Embankments, to contain 250,000 gallons, Access Road thereto, and other ancillary works in connection therewith, at PENPARC, on the A487 Road, about 2 miles east of Cardigan.

Copies of the Specification, Bill of Quantities and Form of Tender may be obtained from the Engineers, MESSRS. ROFE AND RAFFETY, 9 Brewer's Green, Buckingham Gate, London, S.W.1, upon payment (by cheque only) of Two Guineas deposit, which will be repaid upon the receipt of a bona-fide Tender and the return of all documents and drawings supplied.

The Contract drawings may be inspected at the Office of the Engineer to the Board, 36 Alban Square, Aberaeron, Cardiganshire.

Tenders, in plain sealed envelope endorsed "Tender for Contract No. 24," are to be delivered to the undersigned not later than 30th NOVEMBER, 1961.

The Board does not bind itself to accept the lowest or any Tender.

J. E. R. CARSON,
Clerk to the Board.

County Offices,
Marine Terrace,
Aberystwyth,
Cardiganshire.

WORTHING CORPORATION WATER UNDERTAKING.

PROPOSED 9IN. TRUNK MAIN.

TENDERS are invited from public works contractors with experience of laying 9in. dia. water mains and over, for the LAYING of approx. 2,000yd. of 9in. dia. WATER MAIN, completed with Valves, Hydrants, Connections and Contingent works.

Form of Tender, General Conditions, Specification and Drawings may be obtained on application to the Water Engineer, 47 Chapel Road, Worthing, on payment of a deposit of £5, which will be returned on receipt of a bona-fide Tender.

Tenders, in the plain sealed envelope to be provided, endorsed "Tender for 9in. Water Main," must be delivered to the undersigned not later than MONDAY, 20th November, 1961.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.

CONTRACTS

BOROUGH OF SCARBOROUGH.

TENDERS FOR UNIFORMS.

The BOROUGH COUNCIL invite TENDERS for the SUPPLY of UNIFORMS for certain officials and other employees in the service of the Corporation.

Full particulars and Forms of Tender may be obtained on application at the Town Clerk's Office, Town Hall, Scarborough.

Sealed Tenders, endorsed "Tender for Uniforms," must be delivered to the TOWN CLERK before THURSDAY, 23rd November, 1961.

The lowest or any Tender is not necessarily be accepted, and the right is reserved to accept a Tender in whole or in part.

The Borough Council also do not guarantee that the whole or any of the Uniforms as set out in the Schedule will necessarily be purchased.

CITY OF STOKE-ON-TRENT.

HIGHWAYS ACT, 1959.

MAKING-UP OF PRIVATE STREETS.

EDEN GROVE, ETC., MEIR—SCHEME NOS. 30 TO 32, INCLUSIVE.

The Corporation invite TENDERS for the MAKING-UP of the ABOVE STREETS.

Drawings and Conditions of Contract may be seen, and Bills of Quantities and Specification obtained, from the City Surveyor's Department, Town Hall, Stoke-on-Trent, on payment of £2 which will be returned on receipt of a bona-fide Tender.

Tenders, at price of Bills of Quantities must be delivered to the Town Clerk, Town Hall, Stoke-on-Trent, in the separate envelopes provided, not later than 12 Noon on WEDNESDAY, 15th November, 1961.

Town Clerk.
HARRY TAYLOR.

BERKHAMSTED URBAN DISTRICT COUNCIL.

ANNUAL TENDERS.

TENDERS are invited by the above Council for the SUPPLY and DELIVERY of the UNDERMENTIONED MATERIALS, the REBRISTLING of ROAD SWEEPER BRUSHES and the RESURFACING of ROADS for the 12 months commencing 1st April, 1962:

- (1) Bitumen Emulsion.
- (2) Fine Cold Asphalt (Granite or Slag Aggregate).
- (3) Tarmacadam.
- (4) Concrete Kerbs.
- (5) Precast Concrete Flag Paving.
- (6) Grit for Frosty Roads.
- (7) Rebristling (by the spiral wound method) of Brooms for Karrer-Yorkshire Road Sweeper.
- (8) Surface Dressing of Roads.

Tender documents may be obtained from the Engineer and Surveyor, Civic Centre, Berkhamsted, Herts.

Tenders, in plain sealed envelopes endorsed "Tender for the Supply of Road Materials," "Tender for the Rebristling of Road Sweeper Brushes" or "Tender for the Surface Dressing of Roads," must be received by the undersigned not later than 9 a.m. on THURSDAY, 14th December, 1961.

The Council does not bind itself to accept the lowest or any Tender.

D. T. THORNE,
Clerk of the Council.
Civic Centre,
Berkhamsted, Herts.
24th October, 1961.

HAVERFORDWEST RURAL DISTRICT COUNCIL.

ST. DAVIDS (SOLVA ABSTRACTION) WATER SUPPLY SCHEME.

FIRST SECTION—RESERVOIR, BOOSTER AND MAINS.

TENDERS are invited from competent civil engineering contractors, on a Fixed-price Basis, for the CONSTRUCTION of a CONCRETE MASS CONCRETE and REINFORCED CONCRETE SERVICE RESERVOIR of 170,000-gallon capacity, together with a BOOSTER STATION, at GLASFYRN, St. Davids, including Access Roads and Site Fencing, and approx. 4,200yd. 6in., 100yd. 4in. and 100yd. 2in. SLOPES, and 100yd. 4in. ASBESTOS-CEMENT WATER MAINS, with Valves, Fittings and ancillary works. St. Davids lies approx. 15 miles west-north-west of Haverfordwest.

Plans, Specifications and Bills of Quantities may be obtained from the Council's Surveyor and Water Engineer, Civic Centre, Haverfordwest, Pembs.

No deposit is required, but contractors are expected to return all drawings and documents, and the Council reserves the right to charge for all or any such items which are not returned.

Tenders, in plain sealed envelopes endorsed "St. Davids Reservoir 1st Section," should be returned to me not later than MONDAY, 4th December, 1961.

The Council does not undertake to accept the lowest or any Tender, and acceptance is subject to approval by Welsh Office, Ministry of Housing and Local Government.

HENRY J. DICKMAN,
Clerk of the Council.
8-10 Picton Place,
Haverfordwest, Pembs.
26th October, 1961.

NARBERTH RURAL DISTRICT COUNCIL.

EASTERN CLEDDAU ABSTRACTION SCHEME.

FIXED-PRICE TENDERS are invited from experienced contractors for the CONSTRUCTION of a RIVER INTAKE, REINFORCED CONCRETE PUMPING STATION, 8,000ft. of 8in. ASBESTOS-CEMENT RISING MAIN, Treatment Plant House, and other appurtenant works.

Plans, Specifications and Quantities may be seen at the Offices of the Council's Consulting Engineers, MESSRS. WARD, ASHCROFT AND PARKMAN, Chartered Civil Engineers, The Temple, Old Street, Liverpool, 2, or at the Council Offices, Bloomfield, Narberth, Pembrokeshire, and copies of the Tender document may be obtained from the undersigned on payment of a deposit of Five Guineas (by cheque payable to Narberth R.D.C.) which will be returned on receipt of a bona-fide Tender not subsequently withdrawn, and the return of documents loaned to the contractors.

Tenders, in plain sealed envelopes endorsed "Eastern Cleddau Abstraction Scheme," to be delivered to the undersigned not later than Noon on THURSDAY, 30th November, 1961.

C. J. H. BEYNON,
Clerk to the Council.
Council Offices,
Bloomfield,
Narberth, Pembs.

CONTRACTS

COUNTY COUNCIL OF DURHAM.

TENDERS invited for SUPPLY of the FOLLOWING:

- (1) Typewriters.
- (2) Physical Education and Organised Games Equipment to Schools.
- (3) Woodwork and Metalwork Machines and Equipment to Schools.

Forms of Tenders, returnable by 8th NOVEMBER, 1961, and details from undersigned.

G. H. METCALFE,
Director of Education.

Shire Hall,
Durham,
23rd October, 1961.

HOLBORN BOROUGH COUNCIL.

TENDERS are invited for the SUPPLY of a MECHANICAL ROAD SWEEPER/COLLECTOR, preferably capable of sweeping nearside and offside channels. Inquiries to the Borough Engineer prior to submission of Tender are invited.

Tenders, in plain envelopes endorsed "Tender for Road Sweeper," addressed to the TOWN CLERK, Town Hall, High Holborn, W.C.1, to be received by the 30th NOVEMBER, 1961.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

NEWCASTLE QUAY EXTENSION.

TENDERS are invited for the LAYING of approx. 18,000 sq. yd. of 10in. thick REINFORCED CONCRETE DECK SLAB, TRANSIT SHED FOUNDATIONS, APPROX. 150ft. LENGTH OF 10in. LINE DOCK RAIL, and CRANE TRACKS, and appurtenant Drainage and other works, for the Newcastle Corporation Quay Extension.

The works for which Tenders are now invited are to be carried out upon completion of the contract now in progress, and expected to be completed by February, 1962.

Contract documents and Drawings can be obtained from the City Engineer, Town Hall, Newcastle upon Tyne, 1, upon payment of a deposit of Five Guineas by cheque made payable to the City Treasurer, Newcastle upon Tyne, which will be returned upon receipt of a bona-fide Tender.

Tenders are to be returned to the City Engineer not later than First Post on the 5th DECEMBER, 1961.

No Tender will be considered which is not enclosed in the official Tender envelope, which must not bear any name or mark to indicate the sender.

The Corporation do not bind themselves to accept the lowest or any Tender.

By Order.

JOHN ATKINSON,
Town Clerk.

Town Hall,
Newcastle upon Tyne, 1.
November, 1961.

CHAPEL-EN-LE-FRITH RURAL DISTRICT COUNCIL.

ERECITION OF 57 HOMEVILLE TRADITIONAL HOUSES IN SIX PARISHES, INCLUDING SITE PREPARATION IN THREE.

TENDERS are invited on a Fixed-price Basis for the ERECTION of 57 HOUSES/BUNGALOWS, as follows:

- Peak Date—8 Maisonettes (including Site Preparation).
- Dove Holes—8 Maisonettes (including Site Preparation).
- Chapel-en-Frith—16 Bungalows (including Site Preparation).
- Chinley—4 Maisonettes and 2 Bungalows.
- Hayfield—6 Bungalows.
- Charlesworth—13 Houses.

Civil Engineering contractors may tender separately for Site Preparation Works.

Tender documents may be obtained from the HOMEVILLE CO., LTD., 12 Craufurd Rise, Maidenhead, Berkshire, upon payment of a deposit of £2 2s. (made payable to the Council), which will be refundable upon receipt of a bona-fide Tender and return of all documents.

Tenders, on the official form, to be sent to the Clerk of the Council, at the address below, on or before 24th NOVEMBER, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

RAYMOND CROFT,
Clerk of the Council.

Council Offices,
Hayfield Road,
Chapel-en-Frith,
Via Stockport.

FLINTSHIRE EDUCATION COMMITTEE.

TENDERS are invited for the FOLLOWING:

- (a) Mold Welsh Bilateral School:
- (b) Woodwork Benches and other Workshop Furniture.
- (c) Woodwork Tools.
- (d) Metalwork Tools.

(2) For Glyndwr County Secondary School, Rhyd, Flintshire.

Applications for Schedules (stating requirements) should be made to B. H. WILLIAMS, B.Sc., Ph.D., Director of Education, County Education Offices, Mold, Flintshire.

Closing date for receipt of Tenders is Noon on 28th NOVEMBER, 1961.

For Contracts received too late for classification see page 61

APPOINTMENTS VACANT
BOROUGH OF ROWLEY REGIS.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the APPOINTMENT of ENGINEERING ASSISTANT, Grade A.P.T. II.

Preference will be given to applicants who have had experience in sewerage and road construction, and passed the Joint Institution Intermediate Examination.

Applications, stating age, qualifications and experience, with the names and addresses of three persons to whom reference may be made, should be sent to S. G. WOOD, Borough Engineer and Surveyor, not later than MONDAY, 13th November, 1961.

G. C. COOKSON,
Town Clerk.

Municipal Buildings,
Old Hill,
Staffs.

APPOINTMENTS VACANT

HAMPSHIRE COUNTY COUNCIL.

ROADS AND BRIDGES DEPARTMENT.

ROAD FOREMAN REQUIRED for County Surveyor's Department, for work in the New Forest Division, Msc. Grade II (£625-£668 p.m. overtime), commencing salary according to qualifications and experience. A house will be available at Totton at a moderate rent.

Candidates should be not more than 45 years of age, and must have had experience in the handling of roads and road construction work, and possess a current driving licence.

A motor van will be provided and maintained by the County Council.

The post is subject to a satisfactory medical report. In appropriate cases the County Council assists with removals and separation allowances.

Alternatively, applications from men, preferably with some experience of road construction work, for training as Road Foreman, would be considered, starting at £11 9s. 10d. per week. Application forms, returnable by 8th NOVEMBER, from the COUNTY SURVEYOR, The Castle, Winchester.

BOROUGH OF LYTHAM ST. ANNES.

APPOINTMENT OF ENGINEERING ASSISTANTS.

APPLICATIONS are invited for the APPOINTMENT of GENERAL ENGINEERING ASSISTANTS on Grade A.P.T. I (£645-£681) and A.P.T. II (£815-£860).

Applicants should have been trained in a Municipal Engineering Office, or applicants for the Grade II appointment should have passed the Part I Examination of the Institution of Municipal Engineers, or an equivalent. The appointments will be subject to the Provisions of the Local Government Superannuation Act.

The Council will be entitled to require, notwithstanding the passing of a medical examination, to assess one of the successful applicants with housing accommodation.

Applications, stating age, education, and details of experience, accompanied by copies of two recent testimonials, should be forwarded to the undersigned not later than SATURDAY, 4th November 1961.

R. A. CORK,
Town Clerk.

Town Hall,
Lytham St. Annes.

CITY OF SHEFFIELD.

CITY ENGINEER AND SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited from suitably qualified persons for the FOLLOWING APPOINTMENTS on the staff of the City Engineer and Surveyor and Town Planning Officer (Mr. C. R. Warman, B.Sc., M.I.C.E., M.I.M.E., M.T.P.I.):

- (a) Senior Engineering Assistant—Grade A.P.T. V (£1,310-£1,480 p.a.). The person appointed to this post will be required to work on major road and improvement schemes which have already been approved by the Ministry of Transport in the three years Rolling Programme.
- (b) Senior Engineering Assistants—Grade A.P.T. IV (£1,140-£1,310 p.a.).
- (c) Senior Engineering Assistants—Grade A.P.T. V (£600-£640 p.a.).
- (d) Graduate Assistants—Grade A.P.T. I/II (£645-£696 p.a.).

The commencing salary for each of the above posts will be in accordance with experience and qualifications.

Contributions will be made towards approved removal expenses.

Superannuation posts, N.I.C. Conditions of Service, medical examination.

Applications stating age, education and training, qualifications, experience, present and past appointments (with dates and salaries) and quoting the names of two referees should be submitted to the undersigned by the 13th NOVEMBER, 1961.

JOHN HEYS,
Town Clerk.

Town Hall, Sheffield, 1.

CITY OF WINCHESTER.

APPLICATIONS are invited for the POSTS OF:

- (a) JUNIOR ARCHITECTURAL, and (b) JUNIOR ENGINEERING ASSISTANTS in the City Engineer's Department. Salary within Grades A.P.T. I/II, according to qualifications and experience. The appointments are subject to the conditions of service laid down by the Southern Provincial Council and to the Local Government Superannuation Act.

Applications, stating age and details of experience, together with the names of two referees, should be addressed to the City Engineer, Guildhall, Winchester, and should reach him not later than FRIDAY, 10th November, 1961.

In the case of (a), the post has been designated as a key post for housing purposes, and suitable housing accommodation will be made available.

M. H. McCALL,
Town Clerk.

Guildhall, Winchester.

20th October, 1961.

CAMBORNE - REDRUTH URBAN DISTRICT COUNCIL.

APPOINTMENT OF ENGINEERING ASSISTANT, GRADES A.P.T. III/IV.

APPLICATIONS are invited for the APPOINTMENT of ENGINEERING ASSISTANT at a salary within Grades A.P.T. III/IV, according to experience. Car allowance on the Essential Users Scale will be paid.

Applicants must be Associate Members of the Institution of Civil Engineers and/or hold the Testamur of the Institution of Municipal Engineers, and should have some experience in the design and construction of sewerage and in general municipal engineering works.

The appointment is subject to the Provisions of the Local Government Superannuation Acts, 1937-53, to the National Joint Council's Conditions of Service, and is terminable upon the expiration of one month's notice, in writing, by either side.

Applications, giving full details of qualifications, experience, and present salary, together with the names of two persons to whom reference may be made, should be forwarded to the City Engineer and Surveyor, not later than 11th NOVEMBER, 1961.

Consideration will be given to the provision of housing accommodation, if required.

The successful applicant will be required to pass a medical examination to be carried out by this Council's Medical Officer of Health.

Canvassing, either directly or indirectly, will be a disqualification, and applicants must disclose their relationship to any member or senior officer of the Council.

S. C. WILSON,
Clerk of the Council.

Council Offices,

Camborne.

16th October, 1961.

APPOINTMENTS VACANT

CEYLON. DEPARTMENT OF GOVERNMENT ELECTRICAL UNDERTAKINGS. HYDRO-ELECTRIC SCHEME—STAGE III. POST OF FOREMAN INSPECTOR.

APPLICATIONS are invited for THREE POSTS of FOREMAN INSPECTOR in the Department of Government Electrical Undertakings, for work in connection with the hydro-electric scheme. The appointments will be for a period of two, 2½ years.

The salary of these posts is £1,200/£1,500 p.a., and the selected candidates will be placed on a point (fixed) in keeping with their experience. Payment of salary will be at the current rate of exchange.

Applicants who will be required to furnish a medical certificate, and to their physical fitness for service in Ceylon, should have sound civil engineering constructional experience.

The Ceylon Government will contribute 7½ per cent. of salary to a provident fund. Free passages to and from Ceylon will be provided for each successful applicant and his family, to a maximum of four persons besides the applicant. Rent allowance, if not in occupation of Government quarters, and cost of living allowance are payable in terms of Government Regulations in force at the time.

A specimen copy of the letter of appointment can be obtained at the Office of the Ceylon Government Representative.

Applications, giving full details of experience, should be submitted (in triplicate), with three copies of testimonials, to the Consulting Engineers, PRECEC, CARDEW AND RIDER, B, 10 and 12 Queen Anne's Gate, Westminster, London, S.W.1, within 14 days of the publication of this advertisement.

THURROCK URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited for the ABOVE APPOINTMENT to supervise the construction of an indoor swimming pool and public hall. Contract value—£500,000. Applicants should have extensive experience in supervision of structural steelwork, reinforced concrete water retaining structures, and in building construction with high-class finishes. Appointment pensionable and expected to last some 2½ years. Salary: £1,500/£1,750 p.a. dependent on qualifications and experience of successful applicant. Housing accommodation considered if successful candidate resides more than 20 miles from Thurrock. Applications, stating age, qualifications and experience, and quoting three referees to CLERK OF THE COUNCIL, Council Offices, Grays, Essex, by 6th NOVEMBER, 1961. Canvassing disqualifies. Relationship with members or senior officers of the council must be disclosed.

NORTHWICH URBAN DISTRICT COUNCIL.

ENGINEERING ASSISTANT.

APPLICATIONS are invited for the POSITION of GENERAL ENGINEERING ASSISTANT on Grade II of the A.P.T. Division of the National Scales (£815-£960 p.a.).

Applications, giving details of qualifications, age, experience, and the names and addresses of two persons to whom reference may be made should be received by the undersigned by Noon on FRIDAY, 3rd November, 1961.

Housing accommodation available if required.

H. D. HOCKING,
Clerk of the Council.

URBAN DISTRICT COUNCIL OF BEESTON AND STAPLEFORD.

SENIOR ASSISTANT ENGINEERS.

APPLICATIONS are invited for TWO POSTS as SENIOR ASSISTANT ENGINEERS on Grade A.P.T. IV (£1,140-£1,310).

These posts offer excellent opportunities to gain experience in a rapidly expanding district, and duties will include the design of highway and sewerage improvements and structural design.

Applicants should have an appropriate qualification, such as Corporate Membership of the Institution of Civil Engineers or of the Institution of Municipal Engineers, and should have a good general experience in municipal engineering works.

The posts are permanent and superannuable, and the appointments are subject to the passing of a medical examination.

Housing accommodation will be provided for married applicants, reasonable removal expenses will be reimbursed and a casual user car allowance paid.

Applications, stating age, qualifications and experience together with the names of two referees, to be forwarded to the Engineer and Surveyor, Town Hall, Beeston, Nottingham, not later than 10th NOVEMBER, 1961.

H. D. JEFFRIES,
Clerk of the Council.

BASILDON DEVELOPMENT CORPORATION.

CHIEF ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS.

- (a) Assistant Engineer, Grade A.P.T. IV—Salary Scale £1,140-£1,310 p.a.
- (b) Two Engineering Assistants, Grade A.P.T. II—Salary Scale £815-£960 p.a.
- (c) Two Engineering Assistants, Grade A.P.T. I—Salary Scale £645-£815 p.a.

Applicants should have had suitable training and experience in the office of a Municipal or Consulting Engineer, and should have obtained qualifications appropriate to the grade for which they are applying. Applicants for appointment (a) should be Associate Members of the Institution of Civil Engineers or the Institution of Municipal Engineers, or have equivalent qualifications.

The posts are superannuable and subject to one month's notice on either side.

The Corporation's programme for the next five years includes many interesting projects, such as main roads, bridges, subways, main drainage, etc. The posts offer excellent design experience in this connection.

Applications, giving details of age, education, qualifications, experience, and previous and present employment, together with the names and addresses of two technical referees, should reach the GENERAL MANAGER, Basildon Development Corporation, Gifford House, Basildon, Essex, not later than First Post on MONDAY, 13th November, 1961.

APPOINTMENTS VACANT

GAMBIA.

PUBLIC WORKS DEPARTMENT.

EXECUTIVE ENGINEERS.

Qualifications: Candidates (aged 28-45) should have either a University degree or equivalent recognised by the Institution of Civil Engineers, plus two years' practical experience; or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers, and have had not less than three years' approved practical experience, or be a Member of I.M.M.

Duties: (Post "A")—Supervision and control of construction of roads, steel and reinforced concrete bridges, including site investigation, survey and control of setting-out. (Post "B")—Detailed design and control of the execution of civil and municipal engineering works, mainly of development nature. Emoluments (including gratuity) in Scale £1,665-£2,530 p.a., according to experience.

Terms of Appointment: On contract for one tour of 18-24 months in the first instance.

Free passages. Education Allowances up to £200 p.a. per year.

Apply DIRECTOR OF RECRUITMENT, Department of Technical Co-operation, Carlton House Terrace, London, S.W.1. Give full name and brief details of age, qualifications and experience. Quota RC.210/56/01/14. (Post "A" or Post "B").

LONDON COUNTY COUNCIL.

HOUSING DEPARTMENT.

CLERK OF WORKS REQUIRED (£635 to £845), with sound experience in building construction, particularly concerning dangerous structures and party walls in houses. Experience must include direction of contractors and demolitions, shoring and consequential making good and repair work. Superannuable.

Write not later than 17th NOVEMBER, stating age, qualifications and experience, to DIRECTOR OF HOUSING (G.1/C/2946/11), County Hall, S.E.1.

LINDSEY COUNTY COUNCIL.

HIGHWAYS DEPARTMENT.

WORK STUDY TEAM.

The expansion of the Work Study Unit calls for additional PERMANENT PENSIONABLE APPOINTMENTS to extend the introduction of the Department's incentive bonus scheme. Previous experience in Work study is not essential, but an interest in, and a readiness to learn, work study techniques is required, with a willingness to benefit from the training that will be given after appointment:

- (a) Studymen, Grade A.P.T. I (£645-£815 p.a.). Applicants must have a good G.C.E. at 'O' level, an intermediate certificate, and be able to assimilate technical details of a practical nature. They should have a presentable appearance and be able, when trained, to explain work study techniques to road-workers, looking for mixed outdoor and office work is desirable; a valid driving licence for a car or motor cycle is essential. A possibility for advancement exists for the right man.

- (b) Work Checkers, Grade Clerical I (£630-£710 p.a.). Applicants must be able to measure roadworks and to do simple arithmetic accurately. A knowledge of practical roadworks will be helpful though not essential, as most of the time will be spent on work sites. A valid driving licence for a car or motor cycle is essential.

Applications, on forms obtainable from the COUNTY SURVEYOR, County Offices, Lincoln, should be submitted not later than 13th NOVEMBER, 1961.

HAMPSHIRE COUNTY COUNCIL.

ROADS AND BRIDGES.

OPERATOR for J.C.B. Excavator and Loader REQUIRED in Winchester Division of County Surveyor's Department £10 14s. 10d. per 42-hour week.

Applications, stating age and experience, to be sent to the DIVISIONAL SURVEYOR, Chalkpits, Hockley, Twyford, Winchester, by the 4th NOVEMBER, 1961.

STIRLING COUNTY COUNCIL.

ROADS DEPARTMENT.

CLERK OF WORKS.

APPLICATIONS are invited for the TEMPORARY APPOINTMENT of CLERK OF WORKS on the construction of road improvement and bridge works near Polmont.

The salary offered is £850 p.a. and a subsistence allowance of 5s. per day is payable. No travelling expenses are payable.

The duration of the contract will be approx. 12 months.

Applications in writing, giving age, experience, together with the names of two referees, should be sent to the County Clerk, Vleworth, Stirling, on or before MONDAY, 20th November, 1961.

JAMES D. KENNEDY,
County Clerk.

County Offices,
Vleworth,
Stirling.
19th October, 1961.

BOROUGH OF ASHTON-UNDER-LYNE.

BOROUGH SURVEYOR'S DEPARTMENT.

TEMPORARY CLERK OF WORKS (SEWER RECONSTRUCTION).

APPLICATIONS are invited for the TEMPORARY POST of CLERK OF WORKS in connection with a main sewer reconstruction scheme, estimated cost £44,000. This is one of a series of reconstruction schemes which the Council expects to carry out, and the position, although temporary, may extend over several years.

Applicants should have extensive experience in all branches of this type of work, including tunnelling in bad ground.

The salary payable will be in accordance with Misc. Grade VI of the National Salary Scales (£760-£850 p.a.).

The provision of housing accommodation will be considered.

Details of the appointment and Forms of Application may be obtained from the Borough Surveyor, Municipal Offices, Ashton-under-Lyne, and completed forms should be returned to me by TUESDAY, 14th November, 1961.

G. A. MALONE,
Town Clerk.

Town Hall,
Ashton-under-Lyne.
27th October, 1961.

APPOINTMENTS VACANT

BOROUGH OF HARROW.

APPLICATIONS are invited for the APPOINTMENT of GRADUATE ENGINEERING ASSISTANTS in the Borough Engineer and Surveyor's Department. Salary A.P.T. Grade II (£815 to £960 p.a. plus London Weighting).

Applicants should possess a University degree, or be likely to obtain such as degree shortly. The prospects of further promotion are good.

A successful applicant would have an opportunity to enter into a formal agreement to enable him to be a chartered Civil and/or Municipal Engineer if he so desired, and facilities for further part-time study are granted.

A contribution towards removal expenses will be considered.

The appointments will be subject to the Local Government Superannuation Act, and to the National Joint Council's Scheme of Conditions of Service.

Application Forms are obtainable from the Borough Clerk, to whom they should be returned not later than FRIDAY, 17th November, 1961.

DAVID PRITCHARD,

Harrow Weald Lodge,
Harrow Weald,
Harrow, Middx.

Town Clerk.

BOROUGH OF MACCLESFIELD.

ASSISTANT ENGINEER.

APPLICATIONS are invited for the ABOVE APPOINTMENT in the Borough Engineer's Department. Salary A.P.T. III/IV (£960-£1,310 p.a.). Candidates will be appointed according to experience. Applicants must hold an appropriate qualification.

Particulars obtainable from the Borough Engineer, Town Hall, Macclesfield, to whom applications should be delivered not later than SATURDAY, 25th November, 1961.

Housing accommodation will be provided if required.

WALTER ISAAC.

Town Clerk.

CITY AND COUNTY OF BRISTOL.

APPOINTMENT OF STRUCTURAL ASSISTANT—GRADE A.P.T. IV.

APPLICATIONS invited for POST of a STRUCTURAL ASSISTANT in General Engineering Section of City Engineer and Planning Officer's Department. Salary Grade A.P.T. IV (£1,140-£1,310 p.a.).

Candidates should have good general experience and training in Structural Engineering in reinforced concrete and steel for work largely in connection with administration of Building By-laws, and should be Corporate Members of Institution of Structural Engineers or other appropriate professional institution.

Post permanent, pensionable, medical examination and except in case of an officer transferred from service of another Local Authority, six months' probationary period.

Five-day week; staff restaurant facilities. Housing needs of successful candidate and contribution towards removal expenses favourably considered.

Applications should be arranged in following order: Age, nationality, and whether married or single; education; training; professional qualifications; present post, with salary and date of appointment; previous posts, with salaries and dates of appointment; details of experience; any further remarks in support of application; whether required to terminate present appointment; whether related to a member or senior officer of the Council; names of two referees.

Canvassing disqualifies.

Applications to CITY ENGINEER AND PLANNING OFFICER, Cabot House, Deanery Road, Bristol, 1, by 21st NOVEMBER.

CITY OF WAKEFIELD.

CITY ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING SUPERANNUABLE APPOINTMENTS:

- (a) Principal Assistant Architect (Schools)—Grade A.P.T. V (£1,310-£1,480 p.a.).

- (b) Senior Assistant Architect, Grade A.P.T. IV (£1,140-£1,310 p.a.).

- (c) Assistant Architects (2 vacancies), Grade A.P.T. IV (£960-£1,140 p.a.).

The Council have a large capital programme of schools, housing, and other municipal buildings.

Applicants for appointments (a) and (b) should be A.R.I.B.A., and should have had some municipal experience; and in the case of (c), preference will be given to qualified applicants, and the starting salary in respect of the A.R.I.B.A. appointments will be in accordance with qualifications and experience.

(d) Senior Assistant Engineer—Grade A.P.T. IV (£1,140-£1,310 p.a.).

Applicants must have had experience in Municipal Engineering, and must be A.M.I.C.E. or A.M.I.Mun.E. by examination.

Housing accommodation will be provided if necessary in connection with the above appointments.

A 5-day working week is in operation.

Applications, stating age, the post for which application is made, qualifications and experience, together with the names of two referees, to be sent to the CITY ENGINEER, Town Hall, Wakefield, by the 24th NOVEMBER, 1961.

HAWARDEN RURAL DISTRICT COUNCIL.

APPOINTMENT OF DEPUTY ENGINEER AND SURVEYOR.

APPLICATIONS are invited for the ABOVE APPOINTMENT. Salary in accordance with A.P.T. Grade IV (£1,140-£1,310 p.a.).

Candidates must have a wide experience in all the duties pertaining to the Engineer and Surveyor's Department of a Local Authority, including engineering works and housing, and must be Corporate Members of the Institution of Civil Engineers or the Institution of Municipal Engineers.

The appointment will be subject to the National Conditions of Service, the Local Government Superannuation Act, the passing of a medical examination, and will be terminable by one month's written notice on either side.

Housing accommodation will be considered.

Five-day week.

Traveling allowance will be payable on Essential Scale.

Applications, stating age, qualifications, experience, present and previous appointments, together with names and addresses of two referees, to be received by the undersigned not later than the 13th NOVEMBER, 1961.

Canvassing will disqualify, and candidates must disclose whether they are related to any member or senior officers of the Council.

F. N. V. MEREDITH,

Clerk of the Council.

Council Offices,
Hawarden,
Chester.
27th October, 1961.

APPOINTMENTS VACANT

SIERRA LEONE.

PUBLIC WORKS DEPARTMENT.

SENIOR EXECUTIVE ENGINEER.

Duties: To head Public Works Department, Water Supplies Section.

Qualifications: Candidates (aged 35 to 42) should be A.M.I.C.E., with not less than four years' practising experience after election to Corporate Membership. Experience in urban water supplies and rural water supply schemes are also required.

Terms of Appointment: Contract for one tour of 15-18 months.

Total Emoluments (including gratuity) in Scale £2,645 to £2,817 p.a. Education and Children's Allowances up to £96 p.a. Free passages. Generous leave.

Apply: SIERRA LEONE RECRUITING AGENCY, Room 756, Sanctuary Buildings, Great Smith Street, London, S.W.1, quoting RC210/132/01/CA, and giving full name and age, and brief details of qualifications and experience.

CENTRAL ELECTRICITY GENERATING BOARD.

CLERK OF WORKS—BUSTLEHOLM.

APPLICATIONS are invited for the POST of CLERK OF WORKS for the supervision of civil engineering and building works in connection with the construction of high voltage transformer and switching stations. Applicants should have had considerable experience in similar capacity or as a contractor's general foreman and must have had experience of overheads, drainage, reinforced concrete, and industrial type buildings.

The successful applicant will initially be located on a contract situated between West Bromwich and Walsall, and will eventually be required to cover other contracts in the Midlands area.

Excellent conditions of service, superannuable appointment, salary, according to experience, within the range £920-£1,245 p.a.

Apply, quoting vacancy number 245/61MR on Form AEG, available from the REGIONAL PERSONNEL OFFICE, Central Electricity Generating Board, 53 Wake Green Road, Moseley, Birmingham 13, to be completed and returned by 10th NOVEMBER, 1961.

HERTFORDSHIRE COUNTY COUNCIL.

HIGHWAYS DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS:

- (a) Assistant Engineer—A.P.T. IV/V (£1,140-£1,480 p.a.)
- (b) Assistant—A.P.T. III/IV (£960-£1,310 p.a.)

Consideration will be given to the payment of lodging allowance, return railway fares home, and assistance towards removal expenses, and house purchase.

Apply at once, giving details of experience, qualifications, present salary, age, and names of two referees, to the COUNTY SURVEYOR, County Hall, Hertford.

CIVIL ENGINEER/CONTRACTS MANAGER, for Birmingham area. Must be fully conversant setting-out, use of instruments, estimating, running contracts from initial to final. Good salary and permanency. Write, giving full details, age, etc., to Box V.5011, "The Contract Journal."

CIVIL ENGINEER

REQUIRED for certificate and planning duties on large overseas civil engineering project. Applicants must have wide experience of large-scale projects with contractors.—Write full particulars of career to:

BOX V.4682, "THE CONTRACT JOURNAL."

SENIOR CIVIL ENGINEER REQUIRED on large road contract near Glasgow. Must be experienced in road construction on a large scale, and a capable organiser. For suitable man, salary and conditions can be arranged.—Write Box V.5022, "The Contract Journal."

MSL

CHIEF QUANTITY SURVEYOR

or an expanding firm of civil engineering contractors in the semi-countrified north-east midlands. The company, part of a group with wide interests, habitually carries out simultaneously a large number of contracts of mixed sizes to an annual turnover which has now reached about £1 million. Responsible to a director and controlling a small staff, he will co-operate closely in a team of colleagues and with site staff.

Preferably 33 to 40, candidates must have followed a career in quantity surveying and have had at least three years' recent responsible experience with civil engineering contractors, desirably including medium to heavy construction work: they must be conversant with the preparation and presentation of claims. A professional qualification will carry weight.

Starting salary according to experience, not under £1,600, plus bonus and contributory pension arrangements, car and other benefits. Please send brief details in confidence quoting reference number YA.4135 to A. Shaw Maclarens.

In no circumstances will a candidate's identity be disclosed to our client unless he gives permission after a confidential interview at which he will be given full details of the appointment.

MANAGEMENT SELECTION LTD.

17 Stratton Street, London, W.1

APPOINTMENTS VACANT

CIVIL ENGINEER, with degree or A.M.I.C.E., age 20-35, REQUIRED in head office of well-established firm of Gunite specialists. Permanent and progressive post for the right man. Must have broad civil engineering background, including site experience with contractors. Varied and unique experience offered in surveys, for, and preparation of, remedial schemes, testing, planning and organisation of contracts. Excellent prospects for man with ability and drive. Pension scheme—Apply in confidence, stating age, education, experience, and present salary, to T. Whitley Moran, M.I.C.E., 5 Old Hall Street, Liverpool, 3.

SENIOR ESTIMATOR REQUIRED by firm of civil engineering contractors. Head office appointment, Berkshire. Permanent and progressive post, with superannuation scheme in operation.—Write in confidence, stating age and full details of experience with past employers, and salary required, to Box V.5050, "The Contract Journal."

JUNIOR CHEMIST REQUIRED for asphalt and macadam testing at works near Staines, Middlesex. Write, stating experience and salary required, to SURREY BITUMINOUS SUPPLIES, LTD., Littleton Lane, Shepperton, Middlesex.

BORDER ENGINEERING CONTRACTORS, LTD.

REQUIRE SITE ENGINEERS. Applicants, preferably 22-35 years of age, interested in attaining the position of Agent on civil engineering works, and willing to work in the necessary surroundings, are invited. Essential qualifications are the quick and efficient use of instruments and ability to take measurements and prepare accounts. Salary range £850-£1,100, according to experience.—Apply to:

The Manager,
BORDER ENGINEERING CONTRACTORS, LTD.,
Coach Road, Whitehaven, Cumberland.

CARPENTERS WANTED for shuttering.—Apply THOMAS AND EDGE, LTD., Site Office, Contract Journal Building, 32 Southwark Bridge Road, S.E.1. Phone: WAT 2874.

ENGINEER REQUIRED by civil engineering contractors operating in Scotland and Northern England, for overall supervision of their plant department. The company regard this as an important appointment, carrying a substantial salary, and only senior men with civil engineering experience need apply. Applications, with details of experience, and references, will be treated as strictly confidential.—Write Box V.5021, "The Contract Journal."

A GENT, 27-35, REQUIRED for large sewage disposal works contract. Applicant should have extensive experience in the construction of reinforced concrete structures and the design of fixtures for waste-retaining structures. The position is permanent and pensionable, with first-class prospects for advancement.—Write to Managing Director, R. T. HALEY AND CO., LTD., Cleckheaton, Yorks.

EDITORIAL ASSISTANT
FOR HYDRO-ELECTRIC JOURNAL

A Editorial Assistant is required for a monthly journal specialising in world hydro-electric development. He should hold engineering qualifications, preferably in civil or hydraulic engineering or in corresponding laboratory work. Some practical experience in the hydro-electric or some related field would be an asset. Previous journalistic experience is not a requirement but an aptitude for technical writing is essential, and some knowledge of languages would be useful. The right candidate would be trained with a view to the eventual editorship.

BOX No. V.4995, "THE CONTRACT JOURNAL"

have been retained to advise
on this appointment

APPOINTMENTS VACANT

PROGRESSIVE civil engineering contractors of medium size REQUIRE a FIRST-CLASS ENGINEER/AGENT to take full charge of contracts up to the value of £500,000. Only men with very wide experience of road, bridge and sewerage works, with proven evidence, need apply. Must be able to carry a contract from tendering stages to final certificate. Work generally confined to London and the Home Counties. Car provided, and possible directorship after trial period.—Write, giving full particulars of training, and previous experiences stating age and salary required, to Box V.5025, "The Contract Journal."

JAMES MILLER AND PARTNERS, LTD.

REQUIRE a GENERAL FOREMAN for civil engineering contracts. Unusually good opportunities are offered to a man with drive and ability capable of taking responsibility for major works. Remuneration includes bonus and a pension scheme.—If you are considering changing, write, with full details, to:

JAMES MILLER AND PARTNERS, LTD.,
Pump Lane, Hayes, Middlesex.

A SPHALT MANUFACTURE.—ASSISTANT to Manager REQUIRED for Greenhead Depot. Mechanical aptitude and experience of this industry essential. Successful applicant will be given every assistance to take eventual control of this department. Write, giving full particulars of experience, etc., to THE MOWLEM PAVING CO., LTD., 19 Grosvenor Place, S.W.1.

CHALLENGE.—REQUIRED in the West Midlands, a man who thoroughly understands the purchase and sale of contractors' plant. He will be required to start from scratch and build up a complete new department. Age no bar, but experience and proof of capability is essential. State present earnings, age, and total income expected.—Write Box V.5048, "The Contract Journal."

HUSSEY, EGAN AND PICKMERE, LTD.

A number of vacancies are available for SENIOR and JUNIOR ENGINEERS on contract sites in England and Wales. Permanent posts with attractive prospects. Apply, with details of education, training and experience, to:

HUSSEY, EGAN AND PICKMERE, LTD.,
24 Calthorpe Road, Edgbaston, Birmingham, 15.
Telephone: Edgbaston 3661.

WELL-KNOWN civil engineering contractor REQUIRES SENIOR ENGINEERS, over 25 years, for appointments in the Midlands and Home Counties. Applicants must have good general duties experience and able to take charge. The positions offer excellent opportunities and will become permanent. First-class salaries, with pension scheme. Details of experience and qualifications should accompany applications. Write to Box V.5024, "The Contract Journal."

Val de Travers

PRODUCTION MANAGER

PRODUCTION MANAGER REQUIRED to take charge of hot asphalt manufacture at our Manchester Depot. Previous experience in black top manufacture essential.

ROAD SURFACING SUPERVISOR

ROAD SURFACING SUPERVISOR REQUIRED for machine and hand-laying contracts in the Lancashire area. Knowledge of all types of asphalt and macadam road surfacings essential.

YOUNG MAN

YOUNG MAN interested in training to become a Roads Contracts Supervisor, or Measuring Surveyor in all types of road surfacing. Applicants to be based either in the Manchester or Liverpool area.

Apply, in strictest confidence, to:

The Roads Manager.

Val de Travers Asphalte, Ltd.

MODE WHEEL ROAD, Salford, 5, Lancs.

G. E. WALLIS
and Sons Ltd.

of London and Newport, Mon.,

REQUIRE

THE FOLLOWING SENIOR STAFF:

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- (2) QUANTITY SURVEYOR

for substantial building contracts in Monmouthshire and East Glamorgan. Previous experience in senior capacity with medium or large builders from tendering to final account stage essential. Age group 33/45. Assistance with housing after three months. Full details, salary required, in strict confidence, to:

CAMBRIAN CHAMBERS,
CAMBRIAN ROAD, NEWPORT, MON.

APPOINTMENTS VACANT

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EDMUND NUTTALL, SONS AND CO. (LONDON), LTD. REQUIRE the services of a SKILLED MAN to take charge of the setting out of tunnels, etc. Apply, in writing, to:

EDMUND NUTTALL, SONS AND CO. (LONDON), LTD.
22 Grosvenor Gardens, London, S.W.1.

SERVICE FITTER REQUIRED for repair and maintenance of contractors' plant on sites in and near London area. Operating daily from main depot in Harrow. Must have current licence.—Write Box V.5049, "The Contract Journal."

CIVIL ENGINEER (age 25/30) REQUIRED by British civil engineering contractor for six months' initial tour in Kenya. Prospects of permanency, when family could join. — Write Box C1883, L.P.E., 60/62 St. Martin's Lane, London, W.C.2.

URGENTLY REQUIRED

For work on hydro-electric scheme. One ELECTRICIAN. Subsistence and camp accommodation available. Working a minimum 59-hour week.—Apply to:

THE CEMENTATION CO., LTD.
Civil Engineering Division,
Ffestiniog Pumped Storage Project,
Blaenau Ffestiniog, Merionethshire.

CONTRACTORS specialising in the sawing and sealing of joints have immediate vacancy for YOUNG MAN with civil engineering experience. This is an excellent opportunity, with favourable prospects of promotion for applicant with initiative and good education to follow up inquiries and supervise contracts.—Write in confidence, giving details of experience and salary required, to Box V.5081, "The Contract Journal."

GENERAL and ASSISTANT GENERAL FOREMEN REQUIRED for C.E. and building contracts, London area.—Apply in writing only, stating previous experience, to C. J. SIMS, LTD., 2 Victoria Street, S.W.1.

BRITISH JEFFREY-DIAMOND LTD.

invite applications for positions in their drawing offices as

DESIGNERS
SENIOR DRAUGHTSMEN
JUNIOR DRAUGHTSMEN

Interesting work on mining, crushing and constructional equipment, in modern offices and in an expanding organisation, offering opportunity for advancement. Write to the Secretary at Stennard Works, Wakefield, giving details of experience and technical qualifications and quoting Ref. ENG. I.

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BOX NO. 1/- EXTRA.		

CONTRACTS MANAGER REQUIRED by civil engineering contractors, for supervision of a number of contracts in North of England. Must have had previous experience in control of site organisations. Good conditions and salary to suitable applicant. Write Box V.5076, "The Contract Journal."

COMPETENT SURVEYOR REQUIRED for measurements and computation of quantities on earthmoving contracts in Midlands. Permanent, pensionable position to the right man.—State age, qualifications, experience, salary required and when free to take up appointment, to R. A. DAVIES (MIDLANDS), LTD., AND PARTNERS, 102 Hartshill Rd., Birmingham, 34.

CIVIL ENGINEER

ENGINEER REQUIRED for design work in head office planning department. Position offers good experience in a wide variety of construction work with prospects of advancement in rapidly growing organisation. Engineering qualification, coupled with some site and/or design experience necessary. Opportunity and encouragement for achieving Associated Membership. Apply to:

Chief Engineer,
SHEPARD, HILL AND CO., LTD.,
Central Chambers, Ealing, London, W.5.

CIVIL ENGINEER, recently qualified, REQUIRED by international contracting organisation, to work in the London area on piling contracts. Good opportunity for gaining valuable experience. Attractive salary, bonus and allowances.—Write, with brief details, to the Personnel Administrator, THE CEMENTATION CO., LTD., 20 Albert Embankment, London, S.E.1.

DUNCAN LOGAN (CONTRACTORS), LTD.

SUB-AGENTS and SENIOR SITE ENGINEERS REQUIRED for contract sites in Central Scotland. Apply, in writing, giving full details of age, qualifications, experience, etc., to:

DUNCAN LOGAN (CONTRACTORS), LTD.,
Great North Road, Muir-of-Ord, Ross-shire.

A REPRESENTATIVE and SALES CLERK REQUIRED for London and Home Counties and sales office, respectively. Interesting and progressive appointments. Latter should have telephone and correspondence, experience. Pension scheme; canteen; social club; GREENHAM EQUIPMENTS, LTD., Clayton Road, Greenford, Middx. VIKING 3651.

APPOINTMENTS VACANT

FOREMAN FITTER REQUIRED. To be responsible for workshop overhauls and site service. Applicant must have full experience of all types of contractors' plant.—Apply LINK PLANT HIRE, Bury Street, Ruislip 3344.

CONTRACTORS (specialists) near Luton REQUIRE a man aged 25-35 years, attached to head office, as CONTRACTS SUPERVISOR. Knowledge of reinforced concrete and measuring. Good wages and permanent position.—Write Box V.5095, "The Contract Journal."

D. T. BULLOCK AND CO., LTD.

REQUIRE an ESTIMATOR. A man aged 25-32 with previous contractors' experience may find the job that he is looking for with us. He must be experienced in pricing contracts in the industrial building and civil engineering field. The prospects are good. Apply, in confidence, to:

Managing Director,
D. T. BULLOCK AND CO., LTD.,
Aldridge, Staffs.

D. T. BULLOCK AND CO., LTD.

REQUIRE an ENGINEER/AGENT. We are looking for a man aged 27-35 to take charge of small and medium-sized civil engineering and industrial building contracts in the Midlands. The job has prospects. Apply, in confidence, to:

Managing Director,
D. T. BULLOCK AND CO., LTD.,
Aldridge, Staffs.

SALES REPRESENTATIVE REQUIRED for Yorks./Lancs./Cheshire area by established earthmoving equipment distributors. Applicants aged 25/35 must be resident in this area and have a thorough knowledge of the industry, with existing connections. A staff appointment, with pension scheme; car provided and expenses.—Written applications, in strict confidence, giving full particulars, experience, and salary required, to Box V.5091, "The Contract Journal."

SUPERVISOR REQUIRED for roadworks contracts in South West area. Experience in measurement and finalising of contracts essential. Duties include the organisation and control of road maintenance in operation. Permanent post for suitable applicant. Salary commensurate with experience.—Write, stating age and full details, to ROADS RECONSTRUCTION (CONTRACTING), LTD., Garston Road, Frome, Som.

J. I. CASE COMPANY LIMITED

Have a vacancy for a first-class PARTS MANAGER, fully qualified in the latest parts accounting procedure, including mechanised accounts, and stock control. He should preferably have some export experience in this field. He will be resident at the Company's headquarters to be opened in Slough in early 1962. Knowledge of tractors or earthmoving machinery essential.

Please apply in first instance:
SERVICE MANAGER,
Grangefield Road, Stanningley, Pudsey, Yorks.

In accordance with the Company's expansion programme,

J. I. CASE COMPANY LTD

will appoint more area representatives.

Applications are therefore invited from men, preferably aged between 25 and 30, with some basic knowledge of the earthmoving industry and who are ambitious for a successful selling career.

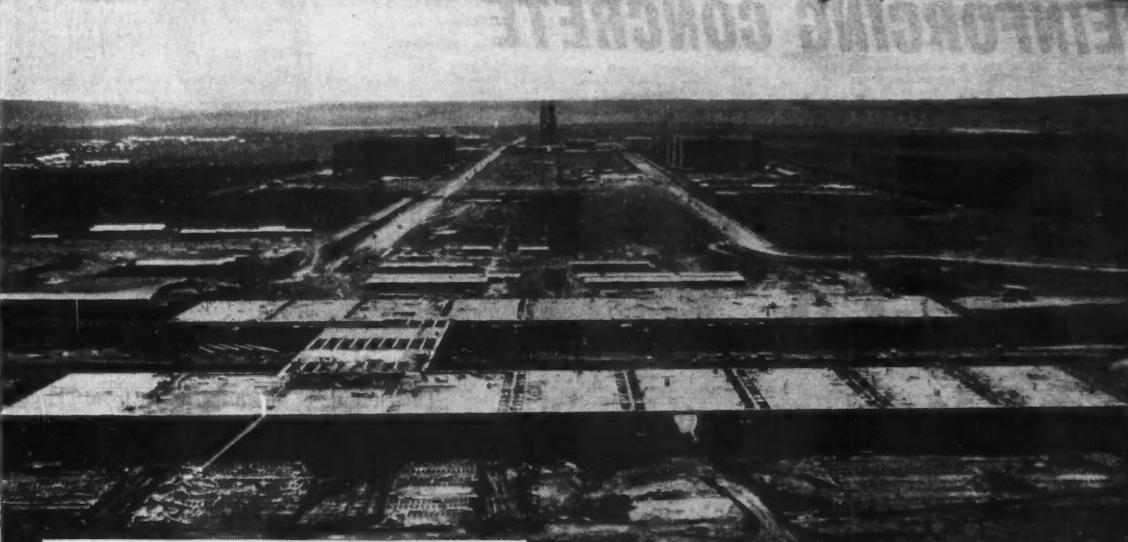
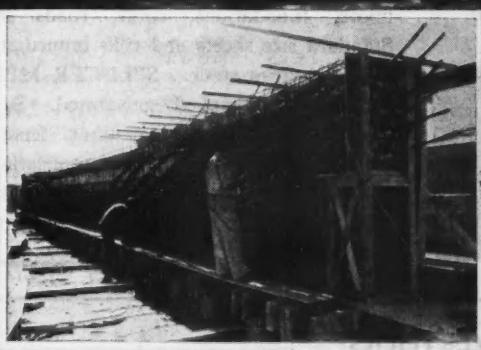
Selling industrial tractors is hard work but successful applicants will be suitably trained in a vigorous and extremely happy company which is growing rapidly. The terms of employment are attractive with plenty of opportunities for promotion. A letter of application, with a brief summary of your career should be sent to:

**THE SALES MANAGER, J. I. CASE COMPANY LTD
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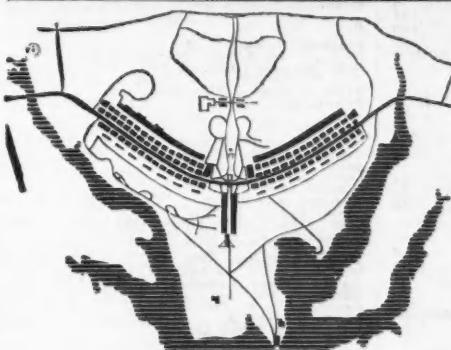


THE CONTRACT JOURNAL
SUPPLEMENT

Opening up new horizons

RYLANDS
HIGH TENSILE PRESTRESSING WIRES
chosen for the wonder city of **BRASILIA**



PLAN OF BRASILIA

This city in the interior, built to stimulate Brazil's prosperity, has cost an estimated 345 million dollars. From a central intersection the ultramodern planning extends to the president's palace built on the shores of one of the largest man-made lakes in the world.

Acknowledgements :
Structural Engineer :
Sergio Marques de Souza, Rio de Janeiro.

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Construtora Rabello S.A., Rio de Janeiro

Wire supplied through :
Adams & Harvey Ltd., London and Associates in Brazil.

The words wire and Rylands have been synonymous in the building of countless new constructions all over the world. Its use in the erection of Brazil's new capital proved again that Rylands can meet any demand for standard and specialized high tensile wire needed in prestressed concrete projects everywhere. In one of the most daring concepts of architecture in this century, Rylands again upheld their reputation by supplying tons of high tensile steel wire for prestressing concrete beams in the city centre intersection flyover: and for the Tocantins Bridge, one of the largest single span prestressed concrete bridges in the world.

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This mesh is manufactured from High Tensile Steel Wire drawn in our own mill and electrically welded by us in accordance with B.S.S. 1221/1945 Part 'A'. Oblong or square meshes for concrete reinforcement in floors, foundations, roofs, roads, etc. Standard size sheets and rolls immediately available from stock. SPENCER MESH can also be supplied galvanised. Small meshes are ideal for partitions, fencing, screens, guards and many other applications. Available, if required, in small panels cut to your own specifications.

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Advertisements received too late for Classification

Gloucestershire County Council. (Agents for the Ministry of Transport.)

LONDON-SOUTH WALES MOTORWAY, M.4
(GLOUCESTERSHIRE SECTION.)

SOIL SURVEY.

TENDERS are invited from experienced contractors for CARRYING OUT a SOIL SURVEY on the line of the Motorway. The work comprises Boring on the site of about 13 miles of Motorway, plus Side Roads, and about 30 Bridges. Soil Sampling, Testing, and the Submission of Reports.

Tender documents obtainable from, and returnable to, the County Surveyor, Quay Street, Gloucester, by 27th NOVEMBER.

GUY H. DAVIS,
Clerk of the County Council.

Shire Hall,
Gloucester.

County Borough of St. Helens. HIGHWAYS ACT, 1959 (CODE OF 1892).

PRIVATE STREET WORKS.

CONTRACT NO. 2172—DENTONS GREEN AREA.

TENDERS are invited for the MAKING-UP of EIGHT STREETS in the ABOVE AREA. The works comprise Excavation, Drainage, and Construction of Carriageways and Footways.

Forms of Tender, Specifications and Bill of Quantities may be obtained from this Department on payment of £2 2s. deposit which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Drawings and Conditions of Contract may be inspected at this Office.

Tenders, sealed in the envelope provided, are to be returned to the Town Clerk, Town Hall, St. Helens, not later than MONDAY, 27th November, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

M. WARD, M.I.Mun.E.,
Borough Engineer and Surveyor.

Town Hall,
St. Helens.

Borough of Ashton-under-Lyne.

RECONSTRUCTION OF FOOTPATHS.

TENDERS are invited for the RECONSTRUCTION of FOOTPATHS in VARIOUS STREETS of the Borough. The works involve Laying approx. 5,500 sq. yd. of Concrete Flagging and 2,500 lin. yd. of Concrete Kerb.

Tender documents may be obtained from the Borough Surveyor, Municipal Offices, Ashton-under-Lyne, on receipt of a £2 2s. deposit which will be returned on submission of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Reconstruction of Footpaths," to be delivered to the Town Clerk, Town Hall, not later than Noon on SATURDAY, the 11th November, 1961.

The Council does not bind itself to accept the lowest or any Tender.

G. A. MALONE,
Town Clerk.

Town Hall,
Ashton-under-Lyne.

Slough Corporation. MERCIAN WAY RECREATION GROUND— DRESSING ACCOMMODATION.

FIXED-PRICE TENDERS are invited for the SUPPLY and ERECTION of a TIMBER PREFABRICATED BUILDING for use as a DRESSING ACCOMMODATION at Mercian Way Recreation Ground, Cippenham, Slough.

The building would be 1,800 super. ft. approx. in size, and Tenders should include for Supply, Erection, Provision of Foundations, Drainage, all Services, Sanitary Fittings, Electrical Installations and complete Decorations.

Contractors will wish to tender for this work should, not later than Noon on the 10th NOVEMBER, 1961, so inform the Borough Engineer, Town Hall, Slough, who will supply a Sketch Plan and Specification during week commencing 13th November.

Tenders must be received by the TOWN CLERK, Town Hall, Slough, in the envelope provided, not later than Noon on the 22nd NOVEMBER, 1961.

Fylde Water Board. Broughton Treatment Plant.

TENDERS are to be invited from experienced contractors for the CIVIL ENGINEERING WORKS in connection with the new Water Treatment Plant at Broughton.

The Contract will comprise the Excavation and Construction of R.C. Foundations and Structures covering an area of 250ft. x 120ft.

Tender documents will be available early in December, 1961, and will be required to be completed and returned not later than the 11th JANUARY, 1962.

Preliminary Drawings, Soil Investigation Report, and other details may be seen at the Board's Head Offices, Sefton Street, Blackpool, prior to receipt of the Tender documents.

Contractors wishing to tender for the work should write to the Board's ENGINEER.

East Shropshire Water Board. Oakengates Water Supply—Contract No. 9.

TENDERS are invited for the CONSTRUCTION of approx. 4,700 lin. yd. of 8in., 8in. and 6in. dia. SPUN-IRON WATER MAINS, TWO REINFORCED CONCRETE SERVICE RESERVOIRS in Six Compartments, and incidental works, in accordance with the Drawings, Specification and Bills of Quantities prepared by the Engineers, H. S. MATHERS AND PARTNERS, of 25 Temple Row, Birmingham, 2.

The Drawings may be seen at, and the Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from, the Offices of the Engineers on or after the 13th November, 1961, on payment of a deposit of Five Guineas which will be refunded upon the receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the form supplied, and in the endorsed envelope provided, are to be delivered to me at my Offices not later than Noon on the 8th DECEMBER, 1961.

The Board does not undertake to accept the lowest or any Tender.

GEORGE THOMAS,
Clerk of the Board.

The Grove,
Shifnal, Shropshire.
30th October, 1961.

County Borough of Bournemouth. Borough Engineer's Department.

DECK CHAIRS, CANVAS, ETC.

TENDERS are invited for the SUPPLY of the following:

- (1) 2,000-3,000 Wooden Deck Chairs, Cotton Canvas 14oz., 36in., 17in. wide and selvedged, or 16in. Synthetic material (to be chosen from samples submitted).
- (2) 150 Folding Armchairs with striped canvas (cotton samples to be submitted).
- (3) 6,000yd. Cotton Deck Chair Canvas 14oz., 36in., 17in. wide and selvedged, var dyed dark green.
- (4) a. 13,000yd. as No. 3 specification, 6,500yd. Orange and 6,500yd. Turkey Red, or
b. 13,000yd. Synthetic Deck Chair material 16in. wide (specify fibres used).
- (5) 250yd. Canvas as No. 3 specification, but striped.
- (6) 1,000yd. Green Canvas 18oz., 36in.

Specification, etc., for chairs obtainable from Borough Engineer. Tender forms are issued for items 1 and 2 only.

Price to include delivery to Beach Depot, Norwich Road, Bournemouth. Delivery of canvas to be completed between April and July, 1962, chairs first week of April, 1962. Samples must be submitted. The Council does not undertake to accept the lowest or any Tender.

Tenders, in plain sealed envelopes appropriately endorsed, but bearing no mark or name indicating the sender, must reach me by 14th NOVEMBER, 1961.

A. LINDSAY CLEGG,
Town Clerk.

Bournemouth.

Stockport Corporation.

BRINNINGTON NEIGHBOURHOOD UNIT— FOOTPATH CONTRACT NO. 6.

TENDERS invited for the CONSTRUCTION of COLD ASHFOOT on TARMACADAM FOOTPATHS (approx. 5,000 sq. yd.). Land Drains, and the Laying of Concrete Edgings.

Particulars from Room 76, Town Hall, Stockport, Hall, Stockport, in envelope provided, by Noon, 6th NOVEMBER, 1961.

HAVERHILL URBAN DISTRICT COUNCIL.

REPAIRS TO TOWN HALL ROOF.

QUOTATIONS are invited for the REROOFING of the SLATE ROOF to the TOWN HALL.

Conditions and Specification can be obtained from the Council's Surveyor.

Quotations, in plain sealed envelopes endorsed "Town Hall Roof," should reach me not later than 18th NOVEMBER, 1961.

The Council does not bind itself to accept the lowest or any Tender.

W. C. BLAKE,
Clerk of the Council.

Council Offices,
Haverhill,
Suffolk.

28th October, 1961.

Waltham Holy Cross Urban District Council.

BROOKER ROAD EXTENSION, ROADWORKS AND DRAINAGE.

The Council invites TENDERS for the ABOVE WORKS, comprising of the FOLLOWING APPROX. QUANTITIES:

- 90 lin. yd. 9in. dia. Glazed Stoneware Foul Sewer.
- 300 lin. yd. 9in. dia. Glazed Stoneware Surface Water Sewer.
- 3,350 sq. yd. 7in. thick Reinforced Concrete Carrageaway.
- 625 lin. yd. 8in. x 10in. Precast Concrete Kerb. 70sq. yd. 7in. thick Bitumen Macadam Carpet on 10in. thick Concrete to form foundations. The Specification, Bills of Quantities, Conditions of Contract and Form of Tender can be obtained from GEO. CLARKE, A.R.I.C.S., M.I.Mun.E., Engineer and Surveyor, Town Hall, Waltham Abbey, Essex, upon payment of £2 2s. deposit, returnable upon receipt of a bona-fide Tender and/or the return of all documents.

The above documents and plans can be inspected at the Engineer and Surveyor's Office without charge during office hours (excluding Saturdays).

Tenders must be returned to me at the unaddressed envelope, not later than Noon, 23rd November, and no Tender will be returned, except in the official Tender envelope, sealed and endorsed "Tender for Brooker Road Extension, Roadworks and Drainage," but shall not bear any mark or name indicating the sender.

Tenders should note that the Scheme awaits Ministry approval, and the Council does not bind itself to accept the lowest or any Tender.

ROLAND E. SMITH,
Clerk of the Council.

Town Hall,
Waltham Abbey,
Essex.

Hornchurch Urban District Council.

ENGINEER AND SURVEYOR'S DEPARTMENT.

REPAIRS TO ACCOMMODATION BRIDGE OVER RAILWAY BETWEEN BURNWAY AND WOODHALL CRESCENT.

TENDERS are invited for the ABOVE-MENTIONED WORKS, which comprise the FOLLOWING:

- (1) The Repointing of Brick Joints over most of the surface area of the bridge.
- (2) Cutting out Defective Bricks and Copings, and Replacing with New.
- (3) Other Remedial Works to Rainwater Down-pipes, etc.

The Specification and Schedule of Works may be obtained from the Engineer and Surveyor, Council Offices, Billet Lane, Hornchurch, Essex, upon the deposit of Two Guineas which will be refunded upon the receipt of a bona-fide Tender not subsequently withdrawn.

The documents must be returned to me at the unaddressed envelope, not later than Noon on MONDAY, 20th November, 1961, sealed in the envelope provided, and which shall bear no indication of the person(s) tendering.

P. L. COX,
Clerk of the Council.

The Grove,
Shifnal, Shropshire.
30th October, 1961.

Urban District of Merton and Morden.

ROADWORKS—COOMBE LANE, BURLINGTON ROAD, ETC.

TENDERS are invited for the following ROADWORKS:

- (1) Reconstruction of part of the Carriageway in (a) Coombe Lane, and
(b) Burlington Road in lean mix concrete with hot rolled asphalt surface. Area about 3,000 sq. yd. for reconstruction and 8,000 sq. yd. of surfacing.
- (2) Surfacing of part of the carriageway in (a) Links Avenue in hot rolled asphalt. Area about 3,000 sq. yd.
- (b) Kenley Road in tarmacadam. Area about 1,800 sq. yd.

Form of Tender, Specification and Bill of Quantities may be obtained from the Engineer and Surveyor, Morden Hall, S.W.19, at whose office the General Conditions of Contract may be seen during normal office hours.

Sealed Tenders, in the envelope provided, bearing my name or mark indicating the sender, must be delivered to me not later than 10 a.m. on MONDAY, 20th November, 1961.

SYDNEY ASTIN,
Clerk of the Council.

Stepney Group Hospital Management Committee.

TENDERS are invited to undertake the FOLLOWING SUPPLIES and SERVICES for the period of 1st January 1962, to 31st December, 1962, at the Establishments under the control of the Management Committee:

Supply of Bread, Fish, Ice and Milk.
Services—Boiler Cleaning; Dry Cleaning; Window Cleaning; Maintenance of Weighing Apparatus; Purchase of Old Rags; Purchase of Waste Fat and Bones; Purchase of Kitchen Waste; Funerals; Removal of Builders' Rubbish, etc.

Forms of Tender may be obtained on application to the Supplier's Office, Stepney Group Hospital Management Committee, Administrative Offices, Mile End Hospital, Bancroft Road, London, E.1, and completed forms to be returned "Tender for" "Tender for" not later than 16th NOVEMBER, 1961.

The Management Committee does not bind itself to accept the lowest or any Tender.

London County Council.

HOUSING DEPARTMENT.

WORKS DIVISION.

APPLICATIONS are invited for the following SUPERANNUAL POSITIONS in the DIRECTOR LABOUR ORGANISATION engaged in the Erection of Houses and Multi-storey Flats in and around London:

- (1) Assistant Contracts Managers—responsible to the Contract Manager for the organisation and supervision of a number of workers. Experience and knowledge in all types of building work and ability to direct and control staff. Salary £1,250 rising by annual increments to £1,500.
- (2) Technical Assistants.

- (a) Surveyors for measuring and operation of incentive schemes for bonus payments for all trades on new construction.
- (b) Surveyors for the preparation of schedules of materials from drawings and specifications for ordering purposes.

Salary £720-£1,100 according to qualifications and experience. Hours of work 08.00 a.m. to 12.00 p.m. with one Saturday morning duty in five.

Write, stating positions applied for, giving age, details of qualifications and experience to the DIRECTOR OF HOUSING (G1/2983/6), County Hall, S.E.1, not later than NOVEMBER 16, 1961.

Urban District Council of Coulsdon and Purley.

CLERK OF WORKS (HOUSING).

APPLICATIONS are invited for the APPOINTMENT of TEMPORARY CLERK OF WORKS (Housing), Grade A.P.T. II (£815 to £960 plus London Area Weighting). Commencing salary within the Grade according to ability and experience.

Applicants should have a thorough knowledge of all branches of the building trade, and have had a wide experience of building work, including houses and flats carried out by contracts. Appointment is subject to National Scheme of Conditions of Service. Local Government Superannuation Act, medical examination, and will be terminable by one month's written notice on either side. Housing accommodation will be available, where necessary.

Applications on forms to be obtained from H. M. COLLINS, M.I.C.E., Engineer and Surveyor to the Council, at the address stated below, giving age, details of experience, qualifications, if any, and the names of two referees, must be submitted to him by not later than First Post on MONDAY, 20th November, 1961.

Canvassing in any form will disqualify.

ERIC F. J. FELIX,
Clerk of the Council.

Wages and Material Clerk, also general office duties, REQUIRED for head office. Apply: A. WADDINGTON AND SONS, LTD., North Circular Road, N.W.10.

Sales Representative REQUIRED to promote S specialist building materials in the London and Home Counties area. — Write Box V.5119, "The Contract Journal."

Robert F. Earley and Partners, Consulting Engineers (Bridge Design and Supervision). Applications invited for the following positions:

BRIDGE DESIGNER with at least three years' experience of design of highway bridges in reinforced or prestressed concrete; RESIDENT ENGINEER, for supervision of construction of six bridges in Northern Ireland, involving prestressed and post-tensioned work and deep piling.—Applications to be made in writing, stating age, experience, and references required, to 35 Victoria Street, Westminster, S.W.1.

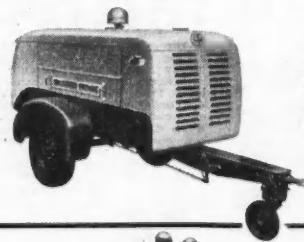
Plant Engineer REQUIRED to control plant maintenance and repairs in South America. Only really first-class and fully experienced man need apply. Must have administrative and practical knowledge. Write Box V.5115, "The Contract Journal."



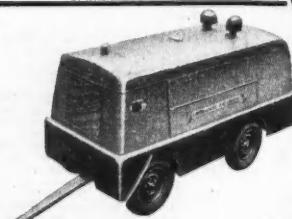
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For air power anywhere over the roughest terrain, this is the unit to choose.



● For a trailer model, today's most outstanding two-tool unit is the new look 125-RO-2. Lighter weight and new 'easy handling' features provide good manoeuvrability.



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THE
CONTRACT JOURNAL
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 THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

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REAPPRAISING APPRENTICESHIP

INDUSTRY cannot expect to have trained men tomorrow if it is not prepared to train them today. That is an axiomatic fact. But training is not simply a question of numbers. In building, for example, the numbers are roughly right. Training must be forward looking, taking account of the evolving pattern of general education and anticipating changes in industrial techniques. But as well as being for the future, training arrangements must recognise hard facts. Arrangements must be realistic and not Utopian.

Among the problems requiring a realistic approach in the building industry are the large number of unindentured apprentices—roughly three out of every seven—and the many firms who either do not train at all or whose training effort is extremely poor. One approach to the problem of unindentured apprentices would be to prohibit them, but such an approach would hardly be realistic as it could cut the number of apprentices by nearly a half. It would in effect be cutting off one's nose to spite one's face. The situation must be tolerated for the time being and attention directed to more immediate problems.

The poor or entirely absent training effort on the part of many firms is a much more pressing problem. Sixty per cent. of building firms do not train, mostly the smaller ones, and many of the remaining forty per cent. train all too poorly. In general, the bigger the firm the lower the number of apprentices to craftsmen. The result is that the bulk of the apprentices are trained in small firms.

Why should some firms train intensively while others not at all or very poorly? It seems clear that some at least of the smaller firms find apprentices a useful source of cheap labour and the quality of the training may not be all that is desired, particularly among unindentured apprentices. It also seems clear that the changing fortunes of the building industry and the mobility of some firms, particularly the larger ones, may militate against training. More use of the block release system might improve matters, and there might be some thought in a roving but indentured apprenticeship underwritten by the industry which would guarantee the apprentice employment and training reasonably near his home. The boy would thus be apprenticed to the industry rather than to any one firm. But this variation on the group apprenticeship scheme might be labelled as Utopian.

Training, if done properly, costs money. Because apprentices begin to repay their keep in the fourth or fifth years there has been a reluctance to shorten the period of apprenticeship, but the Ministry of Labour is known to be in favour of a reduction. This matter is currently being considered by the N.F.B.T.E., particularly from the point of view of the competence of the individual apprentice. The possibility of a shorter apprenticeship might make it easier to "sell" the idea of an apprenticeship to school leavers, and it need not necessarily reduce the standard of training, for boys tend to pace themselves to the time given for training. And a shorter training period might produce a better and more attentive approach to study from the apprentice.

But a shorter training period is almost bound to put up the cost of training. It would again focus attention on the question of a training levy often discussed but never implemented. The issue is whether the six out of ten building firms who do not train should contribute financially to the training effort of those who do. In general it seems clear that Britain's training facilities compare unfavourably with those of her competitors who spend more money on education and training. Indeed the only practicable solution to the training levy problem seems by way of general taxation used to provide free training facilities.

The building industry has successfully pioneered pre-apprenticeship courses which have both improved recruitment and distribution among the various trades. But surely it is high time that all building apprentices had to pass a test before becoming craftsmen. Such a test would, incidentally, act as a useful check on unindentured apprenticeship training.

What of the future? The unions no less than the employers recognise that the building craftsmen of the future must be very different from those of yesterday. New designs and techniques are rendering some of the traditional skills redundant and if full economies are to be achieved the old demarcation wrangles must disappear. Sir Richard Coppock himself has suggested a rationalisation to four main divisions: wet-fixing, dry-fixing, metal work and finishing. It is far sighted thinking such as this that is mostly required.

John Sumner's Notebook . . .

DESPITE the incalculable financial advantages which many building firms have gained for themselves through seeking the assistance of the Building Advisory Service in introducing modern management methods to their organisations the bulk of the building contracting concerns in this country are still content to go on in their own sweet way, unnecessarily losing money hand over fist month after month without lifting a finger to remedy the situation. Sometimes I hear the excuse offered that these firms cannot afford to call in these consultants and pay the fees they ask for. People who argue like that just don't deserve to be in business today, let alone make a profit out of it. If management consultants' advice didn't result in savings within a short time far in excess of the once and for all fee charged their science would die over-night; but it doesn't. It thrives as never before.

But the building firms are not the only ones being backward in coming forward. Mr. Raymond Nottage, the Director of the Royal Institute of Public Administration, tells me that only a fraction of the 2,000 odd local authorities in England, Wales and Scotland use work study and organisation and method techniques to keep down their rates and, at the same time, to improve their services.

The case histories of those local authorities which have been wise enough to call in the experts to improve their efficiency provide the material for a booklet, "Work Study and O. and M. in Local Government," which the British Productivity Council has now published. The booklet tells how Dorking, in Surrey, has increased productivity in maintaining council houses by 75 per cent.; how Middlesbrough has achieved a 24 per cent. cut in unit labour costs, a rise in operative productivity of 60 per cent. and, at the same time, an increase in operative earnings of 20 per cent.; and, again, how Warwickshire is saving £80,000 a year on road maintenance.

There must be hundreds of building firms who could never dream of making these savings in a thousand years if left to their own devices. Yet they are there for the asking. A telephone call for the expert is all that is needed.

Building for the Aged

WITH an ageing population the 30,000 new homes being built by local authorities each year for old people are clearly insufficient. There is a growing demand for flats and cottages and Dame Evelyn Sharp, Permanent Secretary to the Ministry of Housing and Local Government, said at the annual meeting of the National Association of Almshouses in London the other day that this is a field in which there is tremendous scope for voluntary effort.

The Government is attempting to encourage this by stimulating the Housing Association movement with a £25m. grant and would like to see the extension of housing associations to every town in the country. There is also a £24 subsidy for every dwelling for the old built by a housing association or an almshouse trust. Voluntary effort is worth encouraging in this way, but I feel that local authorities should play a much larger part than they are in this work. The Ministry could, for a start, call on local authorities to let it be known what proportion of their housing programme for 1962 they are aiming to allocate to housing old people. The published lists, accompanied by the population figures of the areas concerned, should produce some revealing information and indicate in which directions some central pressure needs to be exerted.

In the meantime, I note that the B.S.I.

technical committee which recently revised the British Standard for cast-iron baths (B.S. 1189), have added a rectangular shallow bath to the existing range of patterns. It is hoped that in future this type of bath will become a standard fixture in old people's residential and nursing homes, and in dwellings built specially for the elderly, since one of the hazards of old age and sickness for many people is that, having got into a bath, they have difficulty in getting out again, and often sustain injury through slipping.

The tap-holes can be placed in a corner-wise position near the front of the bath—an added facility for the aged.

Still not enough thought is given to the equipment of homes for the aged. Double stair rails—where stairs have to be included in designs—are essential; low risers and long treads are equally necessary. Too often windows are quite inaccessible for old people to clean, although perfectly easy for younger people to deal with. And, from the planning point of view, is it so often quite unavoidable to put homes for old people half a mile or so away from the nearest shops? Still, these are points for architects.

Formwork Discussion Group

A CAPACITY audience, over 130 strong, attended the third informal meeting held by the Formwork Discussion Group in London last week. The purpose of the meeting was to consider the American Concrete Institute's report "Formwork for Concrete" which provoked one of the most interesting and enjoyable discussions I have heard for some time. I am sure it must also have given considerable pleasure to Mr. W. F. Whyman, London director of Kwikform, Ltd., who instigated the Group.

Success . . .

IT is 25 years since a colleague pointed to me an advertisement in a paper and said to me: "Watch that name, it's going a long way." A few days later, my curiosity aroused, I jumped on a bus going East Londonwards and took a look at the headquarters Acrow (Engineers), Ltd., had established for themselves under a railway arch with £150 capital. Last year this organisation—it is now world-wide—had a consolidated trading profit of £774,310, and at the annual general meeting in London the other day Mr. W. A. de Vigier, the chairman, announced a recommendation by the directors of a final dividend of 12½ per cent. on the Ordinary shares making 47½ per cent. for the year on the increased capital. In addition, a 25th Anniversary bonus of 2½ per cent. was paid on September 5.

As Mr. de Vigier recalled, the firm started in 1936 at a time when over 1,000,000 were unemployed and war was looming ahead. Soon war came and as the company had no E.P.T. standard all profits went in taxation. Years of struggle ensued, but a team of good men was being forged and after the war Acrow grew. For the first 12 years shareholders did not get a penny in dividends; every cent was ploughed back. Since 1949 they have had 10 bonus issues.

What is interesting is that whereas 10 years ago nearly all the firm's output went to the building and contracting industry, today 30 per cent. of total output is exported; 25 per cent. goes to building and contracting; 20 per cent. to agriculture and forestry; 11 per cent. to industrial and catering; and 14 per cent. to Government and mining.

Diversification has obviously paid off! This is private enterprise at its best; and what a fine example it is of men who had faith in themselves and in their work.

Reverse and . . .

AND now to a firm which has been going through a difficult time. At another meeting in London recently Mr. R. S. Hogg, who has built a massive reputation for himself in the company restoration sphere, discussed the position of Williams and Williams, the metal window making firm. He paid tribute to Mr. J. H. W. Margetts, the managing director, but for whom the company would have been in liquidation with a deficit of £500,000.

As things have turned out, against a loss on the previous year of £214,797, the United Kingdom companies in the group traded at a profit of £77,164. After all deductions the United Kingdom profit is £18,232 against a loss of £313,627. The profit of the overseas companies is £113,690 compared with £147,888. That reduction is due mainly to deterioration in South Africa. In that respect Mr. Hogg said: "Our companies there are not losing money. They are not a drain on us. South Africa contributed £70,000 in the year under review. Now they are just holding their own." The building industry in Johannesburg is diminishing rather than expanding its activities.

Of the future, Mr. Hogg said that he was sure the company would do much better and that the company may come back into the dividend list in 1962.

One of the most important things about the company is that it makes aluminium windows. The future, Mr. Hogg believes, is in aluminium.

I agree with him and wish this well-known company well for the future.

Success

BUT let me end with another success story—the story of a firm which 16 years ago had a turnover of £900 and which in the current year will have one approaching £4m. It was in October 1945 that Mr. J. C. Bamford, with a capital of 50s., went into business with an experimental welding set, assembling and welding all-metal agricultural trailers. Expansion followed expansion and by 1950 he had purchased a site at Rochester where today he has a factory of some 150,000 sq. ft., with further extensions on the way. Here was born the Mark 1 excavator, the Hydra-Digga/Loadall, the JCB 4 and the JCB 3 excavators, the last of which has recently gone into production. It is not the easiest thing to pin point the reasons for a man's success. But anyone who has had dealings with J.C.B. soon realises that he knows what he wants and invariably gets it! His constant aim seems to be to do everything better than anyone else, and this aim takes him regularly on the floor of the factory where it is by no means unusual to see him with coat off and sleeves rolled up under one of his machines checking some improvement or pointing out a salient feature to a customer.

But of course no one man can succeed without a good team. Mr. Bamford told me "I have a young team. I drive them hard, but they can take it. And we are going places." Yes, here is another fine example of men who have faith in themselves and in their work. A faith which in the case of the Rochester company is bringing them results not only in the United Kingdom, but in many countries overseas.

PROCON TO BUILD MOMBASA REFINERY

Procon (Great Britain), Ltd., Bush House, London, W.C.2, have secured a contract to build an oil refinery at Mombasa. Work will start in December and is expected to be finished in late 1963.

The plant is planned for a crude oil intake capacity of 1,950,000 tons a year. It is to be built for East African Oil Refineries, a company jointly owned by the Shell Petroleum Co. and the British Petroleum Co.

TAMAR BRIDGE OPENED TO TRAFFIC

Details of Suspension

Cables



Tamar Road Bridge

THE Tamar Road Bridge, linking Devon and Cornwall across the River Tamar was partially opened to traffic last week. Built in just over two years by the Cleveland Bridge and Engineering Co., Ltd., of Darlington, it is the first suspension bridge to be constructed in Britain for 66 years. A toll bridge, receiving no Government grant, it has been erected by the Devon and Cornwall County Councils through the medium of the Tamar Road Bridge Joint Committee.

Traffic is carried on a three-lane carriage-way 33ft. wide with a 6ft. wide footpath at each side. The roadway is 130ft. above the spring tide high water mark and the central span is 1,100ft. between concrete towers 250ft. high. There are two side spans each 374ft. long, the total suspended length being 1,848ft.

Although Cleveland Bridge and Engineering have built many types of bridges in various parts of the world, the Tamar Bridge is the first of its type for which they have been responsible. Working in close collaboration with the consulting engineers, Mott, Hay and Anderson, and

helped by a digital computer team at Manchester University, they drew up a construction programme which would ensure that the roadway was opened to traffic within the period required by the Joint Committee. The scheme was divided into four spheres of operation, to be carried out consecutively. First, the construction of foundations and anchorages; secondly, the building of the main and side towers; thirdly, the manufacture of the main suspension cables; and fourthly, the erection of the suspended structure.

Main Towers

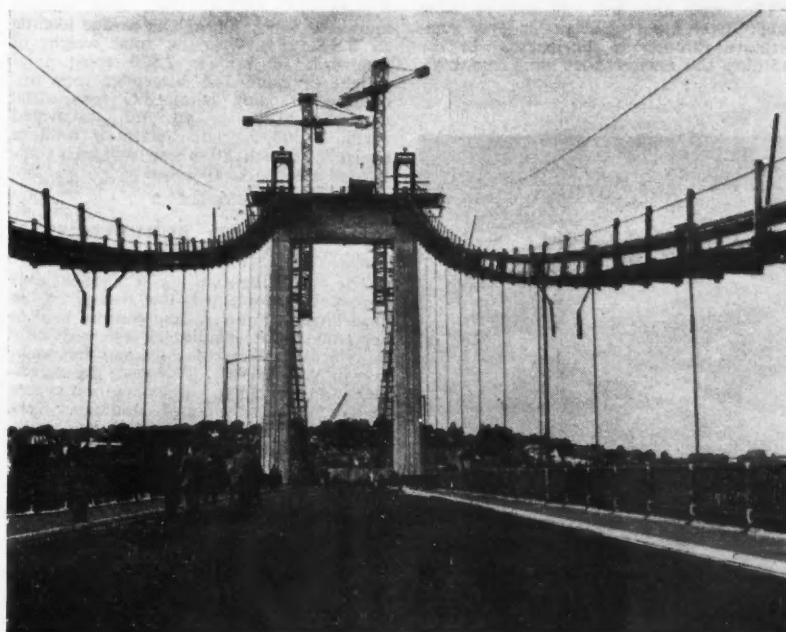
The main towers are built on concrete piers, steel caissons being sunk to an average depth of 36ft. for the pier construction. Compressed air was used to prevent flooding and about 5,000 tons of fill was used for the bunds. Each main tower consists of two legs, 250ft. high and 50ft. apart. Reinforced concrete has been employed throughout and each pair of tower legs is joined by three horizontal members. Building the towers brought its problems. The aperture at the top of the hollow rectangular legs was too small for any available type of climbing crane, and it was therefore decided to attach Bailey bridge panels to the sides of the legs, thus forming two temporary structures within which specially adapted tower cranes could climb as work progressed. One jib always operated 10ft. above the other to prevent fouling.

The central span was built up from a number of 80-ton sections floated to mid-stream on pontoons and raised into position beneath the main cables by winches.

The Tamar Bridge is not due to be officially opened until next spring, but the impelling need for this new crossing has caused the Joint Committee to make it available as soon as possible. For the time being only two of the traffic lanes and one footway will be in use.

Suspension Cables

The suspended structure contains about 2,800 tons of steelwork, which was pre-



Tamar Bridge showing asphalt surface

pared at Darlington and transported to the site by five special trains provided by the British Transport Commission to carry out-of-gauge loads. Holding this structure are two main cables, each comprising 31 individually manufactured and tested steel wire ropes. Each rope is 2,200ft. long and weighs nearly 14 tons, so that the two cables have a total weight of about 850 tons. Altogether, there are 4,500 miles of wire in the cables.

Made at Doncaster by British Ropes, Ltd., for a cost of £200,000, the ropes are of the "locked coil" pattern, never before used on suspension bridge construction. The specification required that the ropes should meet the following demands:

1. Each rope had to be 2.370in. diameter with a guaranteed breaking load of 334 tons.
2. Before manufacture started the accuracy of the rope size had to be forecast. This was to be ± 0.0025 in. diameter.
3. Rope diameter after prestressing and suspended under its own weight had to be 2.365in.
4. Rope diameter when suspended under 100 tons load had to be 2.361in.
5. The residual torque had to be nil or as small as possible.

Subsequent tests showed that the size variations were accurate and that residual torque could be ignored. Site experience confirmed these findings. The 31 ropes comprising each main cable, when arranged in their geometric pattern, needed six aluminium fillers in the corners to make a circle of 14½in. diameter. Each wire underwent 38 production tests before being submitted to the inspectors.

Prestressing

The ropes were prestressed to 50 per cent. of their guaranteed breaking load 10 or more times and during these operations the stress/strain relationship was autographically recorded. When all initial constructional stretch had been removed the "apparent modulus" of the rope over its entire length was determined. Then the load was reduced to 100 tons which is the maximum design working load.

At this load the temperature was determined. With the temperature fixed and the load accurate the prestressing machine was locked to maintain that length, changes in load compensating for alterations in temperature. Allowing for temperature corrections, the rope was measured and marked. Sockets were fitted to the end marks and later the entire assembly was proof-loaded to 167 tons, reduced to 100 tons and the length checked by inspectors.

The prestressing plant at British Ropes'

Doncaster factory has the longest level straight line track in the world—just under 2,500ft. Its capacity is 300 tons, with a Tangye Ram to give the initial loading. An Amsler packingless cylinder and pendulum dynamometer determined the precise load. Extension is determined by a special Amsler extensometer. The ropes were socketed in the prestressing building, each main cable socket weighing nearly 2cwt. empty, and being filled with 90lb. of white metal.

Assembly of Ropes

After proof loading the fitted ropes were coiled horizontally around a 8ft. diameter former. The completed coil measured 11ft. 6in. overall diameter by 22in. high, and all coils were transported to the site by road. Prestressed catwalk ropes were the first ropes to be taken across the river. Next chain link fencing made from 6½ S.W.G. galvanised wire with 2in. mesh was fastened to timber battens at 10ft. centres; these battens carried steel clips to fit around the ropes. The assembly was allowed to slide from the tops of the towers towards the centre and the anchorages. The meshes were joined and the clips on each batten tightened on to the ropes. Vertical battens formed the handrail supports. Hand ropes were placed in position, clamped to the supports and tensioned.

At seven points on the catwalk angle-iron head frames were erected to hold sheaves for the aerial haulage rope. The latter extended from a winch with a surge drum on the Plymouth side, along the north side catwalk to a point near the Saltash anchorage, where it passed round a tensioning device and returned over the south catwalk to a further tensioning device on the Plymouth side and back to the drum. The two ends of the rope were spliced together.

At Plymouth north anchorage a plate carrier was fastened to the haulage rope and a similar one at the Saltash south anchorage. Thus, with all the main cable units being stored at Plymouth, as one carrier took a main cable rope unit over to Saltash the empty carrier returned to Plymouth via the opposite catwalk ready for the next trip. The Plymouth socket was anchored first, 1½in. short, during which operation a Lucker wedge grip was fitted at the Saltash end and tension applied. This caused the rope to slide towards Saltash and lift itself off the catwalk where it had been lying. The tension was maintained on the Lucker grip until the Saltash end was secured, again 1½in. short.

The rope unit was allowed to hang "high" over night to attain an even temperature throughout its length. In the morning the anchor nuts were run back

until the unit was set to its marks at the main saddles, side tower saddles and splay saddles. With the rope set to position, it could readily be picked up at the centre of the span with one finger and thumb even though it weighed 13.7lb. per foot.

During the assembly of the 31 main cable ropes, the interstices which were formed inside the assembly were injected with a black bituminous compound to provide a water seal. When the hexagonal pattern of the main cable was completed the haulage rope was cut into pieces to form guide lines for the carriages which transported the cable bands down the main cable. Aluminium infills were placed at the cable band positions and then the band was slid into place as indicated by marks placed on the number 1 rope during prestressing.

The 120 suspender ropes were made to a specification similar to that of the main cables, but their size was 2.085in. diameter with a guaranteed breaking load of 246 tons. They also were prestressed and lengths were measured accurately to $\pm \frac{1}{4}$ in.

For the initial lifts of the stiffening truss from the river to the centre of the span, high tensile bolts 6ft. long were used to connect the cable band to the upper suspender socket, thus providing the headroom needed to give clearance for the blocks used during hoisting. When the lift was complete the lower suspender sockets were bolted to the chords and the weight taken by the upper high tensile bolts.

The main cables are being wrapped with 0.150in. diameter galvanised mild steel wire.

The acceptance of the £1,346,099 tender of Cleveland Bridge and Engineering by the Joint Committee was announced in *The Contract Journal* on June 25, 1959. Subsequent articles on the construction of the bridge appeared in *The Contract Journal* on August 11, 1960; March 2, 1961, and September 21, 1961.

Facts and Figures

Central span (length), 1,100ft.; side spans (length), 374ft.; total length (excluding approaches), 2,108ft.; carriageway (width), 33ft.; footways (width), 6ft.; kerbs (width), 1ft.; total width 47ft.; deck girders (depth), 18ft. (overall); surface concrete (depth), 6in.; surface asphalt (depth), 1.5in.; height of main towers (above top of piers), 240ft.; height of cable intersection points at main towers (above top of piers), 245ft.; height of side towers (above top of piers), 52.5ft. (Saltash), 72.5ft. (Plymouth); allowable expansion per 100ft. per 100 deg. F., .804in. (expansion at Saltash main tower, 10in.); allowable wind, 100 m.p.h.; bridge loading to B.S.S. 153, 45 units; total weight of steelwork in bridge, 2,800 tons; total weight of cable and suspender rope (including wrapping wire), 895 tons; total concrete, 20,200 cu. yd.; total excavated earth, 24,300 cu. yd.; length of weld in bridge steelwork, 80 miles; total area shot-blasted steelwork, 10 acres.

CHARTERED SURVEYORS' EXAMINATIONS

The Royal Institution of Chartered Surveyors has published the results of an experimental autumn examination, held in September, for candidates referred only in typical subjects of the Final Examination in March, 1961. This year, the experiment was limited to an examination centre in London only, although candidates were able to take English or Scottish set papers.

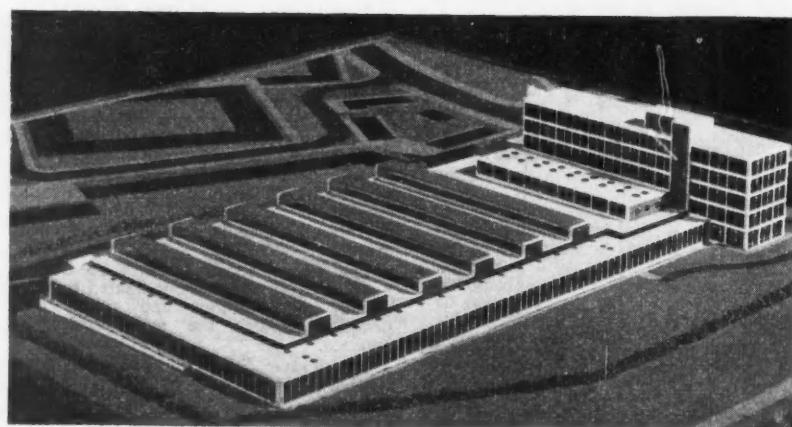
Of the 318 candidates who sat for this autumn examination, 139 were successful.

Obituary

Mr. Horace C. Fread, engineer and surveyor to Esher (Surrey) U.D.C. for more than 30 years until his retirement in 1945.

Mr. Jack Lilley, engineer and surveyor to Barrow-upon-Soar R.D.C.

Mr. Arthur A. Doig, A.M.I.C.E., A.M.I.Struct.E., of Shrewsbury.



A model of the £400,000 building which, as reported recently, Richard Costain (Construction), Ltd., are erecting in Basildon New Town for the Ministry of Works. To be occupied by H.M. Stationery Office, the building consists of an administrative block and a factory section. The former, five storeys high, is 214ft. long by 100ft. deep, and is of reinforced concrete frame construction. The single-storey factory section covers an area of 263ft. by 186ft., and has a monitored roof. External walls of the whole building are clad in exposed aggregate panels. The architect is H. E. Furse, L.R.I.B.A., of the Ministry of Works

£400,000 SOUTHWARK PRESS BUILDING

All Parliamentary Printing Under One Roof

CONTAINING a total floor area of 114,000 sq. ft., the new St. Stephen's Parliamentary Press building recently opened at Pocock Street, London, S.E.1, for Her Majesty's Stationery Office, will deal with all official Parliamentary printing.

The structure is of modern reinforced concrete frame construction using high tensile steel reinforcement, combined with quality controlled concrete with a cube strength of 4,000 lb. p.s.i. at 28 days. Most of the roof areas were covered by precast prestressed concrete units.

Because of the heaviness of printing machinery, the floor loadings of the various areas were designed specially with this requirement in mind. Areas for paper storage or where weighty racks are placed were designed to carry a load of 3cwt. per sq. ft. Other machinery areas will carry a load of 2cwt. per sq. ft., and office and welfare areas 100lb. or 60lb. per sq. ft.

Although the building generally is on a 22ft. 6in. square grid, some spans of main beams are 33ft. 9in. in order to give a clearance for large machines.

Beams and Ducts

Most of the suspended floors have main beams of heavy tee sections running from the front to the back of the building with ribbed slabs spanning at right angles. The main beams were arranged so that the ventilation ducts run alongside from a feeder duct just behind the two-storey portion, allowing the ducts to fit neatly into the general lines without interfering with headroom and without having to pass through any of the beams.

The roof slabs are prestressed box-form units spanning 22ft. 6in. for most of the building. These are topped with lightweight screed and asphalt.

Water-resisting reinforced concrete lines the two basement areas. The standing water level was a little above the boiler house floor level and a well point installation had to be used during the construction of this portion of the foundations.

Plain high tensile steel bars were used for all the main reinforcement.

A bold and simple expression of the industrial nature of the building is represented in the treatment of the elevation. It was also dictated by the requirement of

the plan which links large machine areas with offices and stairs.

All fronts are brick clad, accented by prefabricated green exposed aggregate panels. Two types of facing bricks were used: dark brown, and yellow Padstow handmade bricks contained within the storey's structural concrete elements.

Sparing use was made of expensive finishes. Where it has been used, it is mostly at access points, particularly in the main entrances in Pocock Street. There is a small amount of hardwood, concealed

mezzanine areas and a first floor on which the canteen and kitchens are situated.

Garaging, boiler house (with oil storage chambers) and storage area are in the west basement and the east basement is subdivided into workshops, storage and substation for the London Electricity Board.

Ground floor areas are subdivided into printing sections, including a large floor for rotary presses. Considerable attention was given to reducing noise and vibration by using acoustic materials to walls and ceilings and double glazing.



Front elevation and main entrance

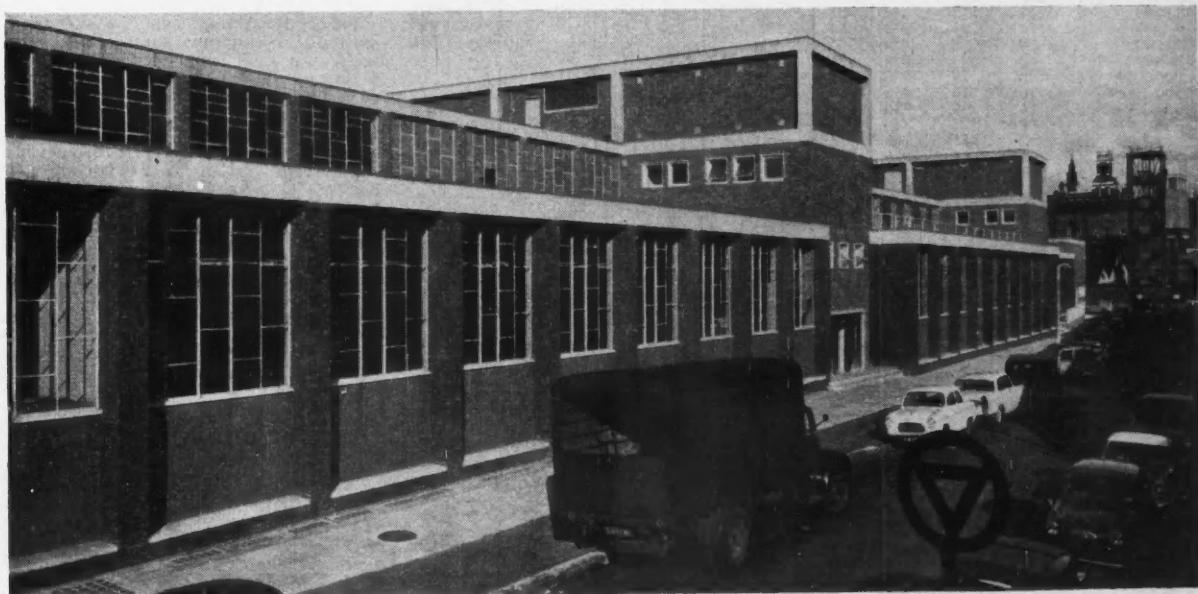
lighting and terrazzo paving have been used. A figure on the exterior at the main entrance represents "The Reader," and was carved in Portland stone by Angelo del Cauchferta.

The interior of the building contains basements at east and west ends and the ground floor area that extends over almost the whole site and covers approximately 57,000 sq. ft. Four staircases serve the

administrative officers and readers' rooms are contained within the mezzanines.

First floor accommodation includes a first-class cafeteria and kitchen, catering for about 300 people. The kitchen is equipped with automatic fan extractor and anti-condensation ceilings. The colour scheme is restrained, as it is throughout the building, and consists of contrasts of

(Concluded on page 70)



Rear elevation of St. Stephen's Parliamentary Press

CENSUS RESULTS FOR CONSTRUCTION

Some Direct Labour Figures Lacking

Our Special Correspondent's article on Direct Labour published on July 27 referred to the reticence of the Government about publishing figures on Direct Labour, but added that some could be found years later in the Census of Production Reports. However, in the latest Census Report on Construction for 1958, some of the usual detailed figures on Direct Labour do not appear, he states.

A FULL Census of Production is taken every four years. The last one was in 1958, and the results for the construction industry have recently been published. But the information provided is significantly less than that published for the 1954 census, particularly as far as direct labour is concerned.

The 1954 net outputs per person employed were published by size of undertaking for contractors, for government departments and for direct labour. The 1958 results show these figures for contractors only. As far as government departments and local authorities are concerned the words "Does not apply" appear against the appropriate tables. One wonders why. However, certain figures can be extracted and they are shown in Table 1.

The table is confined to undertakings employing 25 operatives or more. It will be noted that between 1954 and 1958 the net output per person employed by contractors rose on average from £679 to £890, that of local authorities from £471 to £555, and that of Government Departments from £485 to £623. Perhaps these figures explain the reluctance to show the performance of local authorities and government departments by size.

The figures show a clear tendency for the contractors organisations to move up the scale as regards size. This is revealed more clearly in Table 2 which shows the number of operatives employed between seven major size groups of firms. Particularly noticeable is the significantly smaller labour force employed by the three smallest size groups in 1958 compared with

1954 and the big increase in the 1,000-2,999 group. But there was little change among the very largest contractors.

Although no detailed figures for local authorities and Government Departments are published for 1958, it is possible to produce some interesting comparisons with contractors from the overall figures in the Census Report. These are shown in Table 3. Contractors invest more in capital equipment than direct labour and this is largely to be expected because contractors carry out most of the new work. Contractors also seem to use more supervisors and administrative personnel. And their operatives get the highest earnings. But in the case of other employees the Government department men have easily the highest earnings.

It is of course a pity that the figures are published so late, although collecting them and processing them is a long and arduous task. But it is even more of a pity that some of the detailed figures about direct labour should not have been published at all.

There is a footnote that should be added to this article, for one set of figures about direct labour is published very promptly. These figures show the number of local authority direct labour men employed in separate building or civil engineering departments. These departments, as was noted in the article published on June 27, are growing steadily with a total labour force of 100,000 in 1960 compared with 70,000 in 1955. The latest figures for June, 1961, just published in the Ministry of Labour Gazette, show a further increase to 103,000. Most of the increase was in England.

EXPERIMENTAL USE OF LIGHTWEIGHT CONCRETE ON L.C.C. FLATS

THE housing division of the L.C.C.'s architects department and the council's scientific branch have been collaborating on a scheme for the erection of a 13-storey block of flats using unreinforced lightweight concrete.

Research on the site has led to the determination of the fundamental characteristics of the material—a lightweight concrete based on expanded clay aggregate. It was found to have a surprisingly low water absorption (24 hours), e.g.: Expanded clay aggregate concrete (density 69lb./cu.ft.) 7 per cent.; aerated pulverised fuel ash block (density 51lb./cu.ft.) 36 per cent.

It is evident that the closed cells do not become saturated, says the L.C.C.'s scientific adviser in his annual report. This is presumably because each granule bears a surface coating which prevents the ingress of water. The use of a water-shedding external coating to the structure was therefore found to be unnecessary.

In the absence of a high water absorption, the macrocellular nature of the aggregate would appear to eliminate the risk of spalling of the concrete, the report states.

Mixes of varying proportions were used on the site and experimental blocks made from these were examined in the laboratory to determine their thermal conductivity. Special moulds were made, enabling 12in. by 12in. by 2in. slabs to be cast with truly flat and parallel faces. Two examples are given of mixes yielding concretes of widely different characteristics:

1 : 2 : 3 PC: sand : expanded clay aggregate (2.5 per cent. water, 89lb./cu.ft.) K value = 4.8.

1 : 10 (No fines, air dry, 30lb./cu.ft.) K value = 1.05.

Measurements were made on site of drying and thermal shrinkage on both restrained and unrestrained concrete. It was possible to show that these movements were unusually slight, and hence in the restrained material the risk of cracking is extremely low. Currently an acoustic survey is being made of the finished building to determine the sound-proofing properties of the concrete.

Asphalt Experiment

Another interesting full scale investigation, reported by the council's scientific adviser, was on the practicability of laying hot asphalt over an expanded polystyrene roof insulation.

A preliminary laboratory experiment had indicated that a 1in. cement-sand screed laid over the polystyrene should give sufficient protection. On the site a 1in. expanded polystyrene sheet was covered with a 1in. sand/cement screed and a layer of sarking felt. Continuous measurement of temperature by means of thermocouples showed that at no time did the upper face of the polystyrene reach a temperature sufficiently high to damage it, even when the asphalt was laid at a temperature 50 degrees F. above that recommended.

It was also found that the sarking felt contributed greatly to the protection of the underlying components when laying hot asphalt. Half the completed roof was surface-treated with white chippings and, since the thermocouples are already in position, the opportunity will be taken during the summer to compare the heat absorption properties of the treated and untreated roofs.

UNDERGROUND SYSTEM FOR MONTREAL

The Mayor of Montreal announced recently that work will start next spring on the construction of an underground railway system for the city. It will cost about £50m., and will consist of three lines covering 21½ miles.

The system is to be known as the Metro and two engineers of the Paris Metro are to be engaged as consultants.

TABLE 1
Census Results—Larger Undertakings—1954 and 1958—N.O.P.P.E.*

Average Number Employed	CONTRACTORS				LOCAL AUTHORITIES				GOVERNMENT DEPARTMENTS			
	1958	Firms	1954	1958	1954	1958	1954	1958	1954	1958	1954	1958
25-49	3,103	3,766	788	594	221	454						
50-99	1,969	2,163	812	615	236	456						
100-199	927	970	818	625	158	465						
200-299	297	287	840	648	65	493						
300-399	125	132	856	701	47	486						
400-499	74	75	932	684	38	460						
500-749	99	78	959	725	N/A	468						
750-999	42	45	1,028	693	20	447						
1,000-1,499	40	29	952	679	18	483						
1,500-1,999	16	16	956	934	3	474						
2,000-2,499	14	9	880	732								
2,500-2,999	8	6	960	773								
3,000-3,999	7	11	1,108	741	5	488						
4,000-4,999	4	4	976	721								
10,000 & over	3	4	1,077	828								
5,000-7,499	4	4	1,089	828								
Total	6,732	7,595	890	679	788	852	555	471	17	19	623	485

*Net output per person employed.

TABLE 2
Census Results—Contractors' Labour Force

Size Group Operatives Employed	Total Operatives Employed—Thousands	
	1958	1954
25-49	98	117
50-99	119	133
100-199	112	121
200-399	100	102
400-999	110	105
1,000-2,999	107	83
3,000 and over	85	86

TABLE 3
Census Results—Larger Undertakings—Ratios

	CONTRACTORS	1958	1954	LOCAL AUTHORITIES	1958	1954	GOVERNMENT DEPARTMENTS	1958	1954
Ratio: Operatives to other employees	6	7	8	8	9	12			
Average earnings per operative £	626	490	506	396	533	442			
Average earnings per other employee £	754	588	705	559	846	725			
Capital expenditure per operative £	66	48	27	22	18	17			

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THE CONTRACT JOURNAL

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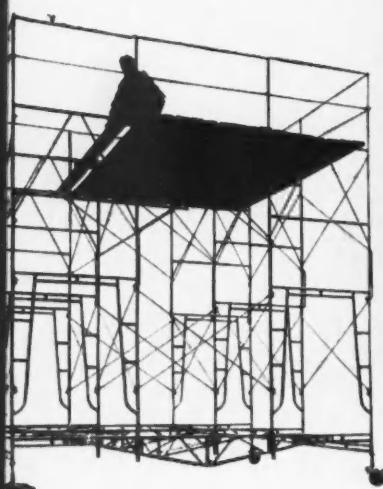
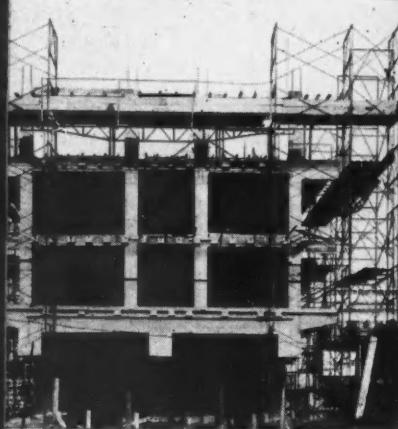
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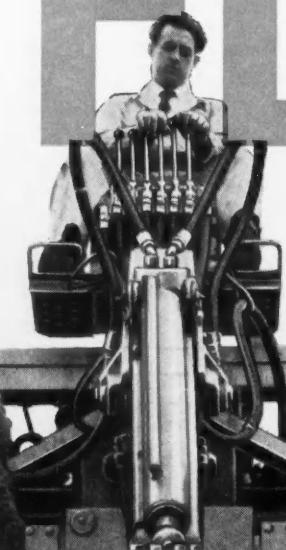
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CUMBERNAULD NEW TOWN

Housing Site Works and Drainage Projects

SOME aspects of engineering development in Cumbernauld New Town formed the subject of a Paper presented at the recent autumn meeting of the Scottish branch of the Institution of Municipal Engineers. The authors were L. W. BUCKTHORP, A.M.I.Mun.E., A. M. I. C. E., D. H. GARSIDE, A.M.I.Mun.E., A.M.I.C.E., and A. S. SCOTT, B.Sc., A.M.I.Mun.E., A.M.I.C.E., of the Development Corporation.

After describing the town road system, and ring road, the authors dealt with site development works for housing, foul drainage, sewage purification and surface water drainage, in the course of which they stated:

To date site development contracts have been undertaken for 3,700 houses. The high density development of these sites has presented several engineering problems.

One which has always proved difficult is the location and timing of the public utilities services, especially as these are usually sited in the access paths to the dwellings. To try to overcome some of the difficulties the services are supplied with drawings of all development as soon as these are available. This is followed by a joint meeting to discuss common problems of access, the Corporation having appointed an officer to co-ordinate all aspects of the works of these outside bodies. Even so problems still remain, one of the most common being the disposal of excavated material for which every one denies liability.

Our latest solution is the provision of a common trench, dug by the housing contractor, which is backfilled with blaes as each service is laid. After all services are completed, the blaes can then be rolled and trimmed to form the base for the footpath. Although this will possibly be expensive it is hoped that it will prove cheaper and more efficient than removing surplus excavated material at a late date in the paving contract, often on daywork rates.

Experimental Techniques

On the estate roads two experimental techniques have been tried. The base of one of the first roads was constructed wholly of red blaes 18in. thick, sealed with 2½in. of base course tarmacadam. This 18ft. wide road stood up to all the construction traffic, including heavy tracked cranes used in the construction of 300 "no fines" concrete houses, for almost three years. At the end of this time, only two or three serious potholes had developed which were made good when the surfacing contract was carried out. While observations on the performance of this road were proceeding a normal 9in. crushed whinstone road base has been used on subsequent estate roads.

The drainage of the clay sub-grade was provided in the first roads by sand drains laid down each side of the carriageway approximately 3ft. deep, this method being recommended by the consultant on soil mechanics who prepared a report for the Corporation. These sand drains worked well until they were disturbed. In practice, however, it was found that the drains were severely damaged during the house construction by the numerous service crossings across their track, and it was found impossible to ensure proper reinstatement. They have now been replaced by a drain in "no fines" concrete which also acts as a kerb base. This has proved very strong as a base and efficient as a drain, and at the same time has cost no more than the original normal concrete base and sand drain.

The soft clay nature of the sites has proved a constant obstacle to construction particularly during the winter months. The red blaes which is normally used as the sub base is insufficient to maintain access

for site construction. During last winter an ungraded slag was substituted for the blaes on the more important estate roads and this proved very effective. Slag has also replaced blaes as a base for the sett paved parking areas as it was found that sets laid on blaes settled under construction traffic. On some sites the top soil has been removed over the whole site at the start of site preparation work in order to achieve the economy inherent in the use of large-scale scraping equipment. It has been found, however, that useful economy can only be achieved if the work starts in the spring, otherwise the exposed sub-soil breaks down to slurry and a further layer has to be removed before house foundations can be laid, this extra excavation offsets some of the initial economies.

The principle of the main footpaths are being constructed in stages with each housing area, and in addition some lengths of temporary access paths are being provided where the more important main paths cross areas not yet planned in detail. The main paths, which are 9ft. or 12ft. wide, have a central marking system such as red quarry tiles in asphalt paths or sets in concrete slab paths to distinguish them from the subsidiary house access paths.

Where these paths meet the town roads, underpasses are being constructed. Several types of underpasses have been used so far, two, situated in natural gullies, are in-situ concrete bridges designed by the Corporation's structural engineer. In most other cases, Armcro multiplate culverting has been used to ensure speed of erection. The size used is 11ft. 6in. diameter which accommodates a 9ft. path with a minimum headroom of 6ft. 6in. Some difficulty has been experienced by water penetration at the joints. Expandite rubber bitumen extrusion, R.B.200 with rubber grommets under the bolt heads is now being used to overcome this problem.

The approaches to the underpasses are designed to make their use as natural as possible, though in some instances the paths have to be as steep as 1 in 10. Where paths steeper than this would have been required flights of steps are used which incorporate pram ramps. In some cases, especially on the north side of the hill, it is feared that the paths, falling between banks, will quickly become dangerous with only slight air frost. Approval has therefore been obtained to the principle of using electric heating cables in the surface of the paths where the danger is particularly apparent and the first of these installations is now being completed.

Foul Drainage

The drainage in Cumbernauld is a completely separate system, the design of the foul sewers being six times the dry weather flow of 60 gallons per head per day. This figure has been agreed with Dunbarton County Council, for whom the Corporation have acted as agents in the design of the foul sewers, and with the Department of Health for Scotland. B.S. quality fireclay pipes are used for 6in. and 9in. diameter sewers and rubber-jointed concrete pipes for all the larger sizes. All the sewers are tested, the air test being the one generally used. This has not led to any undue site difficulties once the pipe-laying gang appreciates the standard which it sets.

By testing all the sewers in this way we have found the standard of jointing improves and the contractor is as keen as we are to return unsatisfactory pipes to the manufacturer. One point that must be made absolutely clear to all site staff is that 4in. of water is not the same as 4lb./sq. in. pressure. A serious accident took place on one of our sewers when the contractor substituted a dial gauge for a broken U-tube and tested the sewer to the higher pressure. It is interesting to

note that the pipes withstood this high pressure but, after taking the initial stress, the expanding stopper blew out of the end.

The main outfall sewers are now 75 per cent. complete including 2,800yd. laid in the Red Burn Glen for which no direct access was available. This difficulty was overcome by the contractor who laid one mile of Jubilee track, most of it in the bed of the burn. Owing to ground conditions and numerous burn crossings the central section of this sewer has been constructed of steel pipes on piers. The Glen is completely wooded and the Corporation's landscape staff propose the construction of a wooden bridge over the steel pipe which will enable people to walk through the area but at the same time preserve the trees from damage, these being developed as a commercial crop.

Sewage Purification

Cumbernauld is divided almost equally by the watershed and most of the main hilltop can drain in either direction. There are, however, areas at either end which will not drain by gravity to the other, which means there must be two sewage purifications works if pumping is to be avoided. It was ultimately decided by the County Council that a treatment works for one-third of the town should be provided at Dalshannon in the south-west corner of the area, the other two-thirds being served by the new works at Dunns Wood in the extreme north of the designated area. The County Council themselves are developing the Dalshannon works, while the Development Corporation have designed the Dunns Wood works as their agents. The first stage of these works, serving a population of 20,000, is now nearing completion, and comprises two comminutors followed by hand-cleaned grit channels, two primary and two final circular settlement tanks using scraping equipment supplied by W. E. Farrer, Ltd., and A.C.M.'s Simplex aeration equipment, sludge pumps and other ancillary equipment.

The Simplex equipment was chosen because of its inherent potential development and simple robust design. The 60ft. diameter primary tanks have a 5 deg. floor slope with 11ft. vertical side wall depth, while the 75ft. diameter final tanks have a 6ft. 9in. vertical side wall depth and a floor slope of 20 deg., this being the steepest floor which it was considered that the contractor could be instructed to lay without top shutters. The inlets of these circular tanks were designed to ensure a good distribution of the flow throughout the depth of the tank and at the same time making use of standard concrete manhole sections.

The weirs for these tanks are constructed in overlapping steel plates. The lower plate is set into the concrete and the top bolted to it using oval slots to enable the weir to be accurately set. Even so, it was felt that there would be uneven flow over the weirs at the lowest flows and therefore triangular notches have been cut in the weir plate to accommodate them. After manufacture the steel plates were shot blasted and treated with Anagel to ensure a long life.

The hand-cleaned grit channels will be replaced by a mechanical detritus tank, should the need for this be established during the first-stage operation. If so, this will be included in the second-stage construction. The sludge from the works will be pumped against a static head of 125ft. by Harland centrifugal pumps to a two-stage Dorr-Oliver sludge digestion plant sited in the Wardpark area a quarter of a mile away from the main works. The County Council are proposing to install a composting plant alongside the digestion equipment to deal with the town refuse and the digested sludge.

(Continued next page, col. 1)

In order to be in a position to deal with the rapid build-up in population which is anticipated to take place from 1962 onwards, the sewage purification works had to be built in two years. This target has been achieved, work starting on the contract in October, 1959, and is now virtually completed, though the digestors, which are a separate contract, will not be finished before the end of the year. The site chosen for the works was originally quite inaccessible. A small contract for the construction of an access road was therefore let during the summer of 1959 and the road completed before the main contract started. This road had to be built across the tree-covered sides of the glen which fall over 100ft. with a maximum slope of 1 in 2. This road, which is 10ft. wide, is constructed of 18in. of red blaes covered with 2½in. bituminous macadam base course. At the start of the main contract, ruts rapidly developed in the wheel tracks, but after initial compaction no further deterioration has occurred, though it has carried heavy construction traffic on a grade of 1 in 10 for the past two years. It is intended to reshape this road and surface it before the completion of the current contract.

Surface Water Drainage

In considering the surface water drainage scheme which has been prepared for Cumbernauld New Town, it is of interest to examine the factors which influenced its design. In the first place, it will be realised that the general approach to the design of surface water drainage schemes is different somewhat to that of most other engineering projects, where the extent of the work is usually fairly well defined. For example, in such cases as the design of a bridge from A to B or the preparation of foundation drawings for a particular building the designer is working within a clearly defined brief. But in considering a scheme for surface water drainage for a new town the designer must first assess the magnitude of the problem in terms of increased run-off in streams before formulating a general scheme for dealing with the surface water drainage. The assessment of future flows is undoubtedly the more difficult task and involves consideration of topography, rainfall, future development and choice of formulae for determining flows.

Having completed the examination of the topography of the area, followed by an assessment of the likely peak flows in the streams after full development has taken place, and examined the town plan, it now remained to produce an overall surface water drainage scheme to satisfy the various requirements.

In formulating possible schemes it was considered that the following points should influence the proposals:

(1) to attempt to eliminate or reduce the

possibility of flood damage outwith the designated area which could be directly attributable to the development of the new town;

- (2) to culvert those streams which will run through house development areas;
- (3) to avoid constructing large sewers or culverts in areas which would embarrass future development;
- (4) to avoid laying large sewers in sections of bad ground and on alignments where reasonable gradients cannot be attained;
- (5) to avoid aggravating existing flood conditions within the designated area unless remedial work could be carried out cheaply. This particularly applies to sections of the Bog Stank and Luggie Water at which flooding is known to occur and where any remedial work would be expensive;
- (6) to avoid laying large diameter sewers down the steeply sloping hillside. This particularly applies to the north side of the hill where the average gradient is 1 in 7, which would require a large number of drop manholes to reduce the velocity and cause constructional difficulties due to the steep slopes.

The scheme finally decided upon satisfied most of the above requirements.

Constructional Work Undertaken

The construction of surface water drainage projects has been related to the programme prepared for house development. The areas on the northern face of the hilltop were among the first to be scheduled for housing and accordingly the Seafar surface water trunk sewer was the first of the drainage schemes to be started. Construction work started in April, 1960, and except for two small sections which were delayed due to way-leave difficulties the contract valued at £42,000 was completed in four months. The opportunity was taken, in making up the tender documents, to include two bills of quantities giving the tenderer the alternative of pricing the work using conventional pipes with concrete bed and haunch or using the specially designed thick walled pipes. In the tenders returned, the thick walled pipe form of construction was generally about £3,000 dearer than the conventional method.

A major portion of the Red Burn S.W. trunk sewer is being constructed at present. The contract is being carried out by Jacksons (Edin.), Ltd., for a tender sum of £120,000 and includes the following: 350yd. 6ft. 3in. x 6ft. 3in. R.C. box culvert; 450yd. 5ft. 9in. by 5ft. 9in. R.C. box culvert; 230yd. 66in. diameter concrete pipe; 80yd. 60in. diameter concrete pipe; 280yd. 39in. diameter concrete pipe; 350yd. 36in. diameter concrete pipes.

This contract is well under way and

should be completed by February, 1962.

It is anticipated that work will be required to be started on the other two trunk sewers within two years, and further it is hoped that the Ravenswood Balancing Pond contract will be ready for placing by the spring of next year as development on the northern slopes will be by this time about 80 per cent. complete. The Red Burn Balancing Pond will require a considerable amount of preparatory work before a broad scheme can be prepared for its development. At present it seems likely that this balancing pond will be of a considerable capacity and, as it will be situated in one of the New Town parks, it is hoped that it will be capable of being designed such that it enhances what is already a very picturesque glen and at the same time provides a valuable amenity feature for the residents.

(Concluded from page 67)
citrous lemon thermoplastic floor, deep blue end walls and white window walls.

Heating is carried out by radiators and radiant panels fed from a low pressure distribution system having modulating control. Domestic hot water is provided by a 500 gallon calorifier in the boiler house with pump circulation to the lavatories and kitchen. A separate hot water services boiler is provided for summer use.

The boiler house contains three 1,500,000 B.Th.U. fully automatic oil-fired ideal sectional boilers for winter heating and D.H.W. load.

A system of forced ventilation is provided for summer use for the machine room areas on ground and first floors. It has humidity control and provision for recirculation.

The electrical installation was carried out in V.R.I cable and screwed conduit. The supply company's transformer and switch room is situated in the basement for which two independent supplies are taken to the main electric cubicle switch panel. Sub mains are run to local switch panels or distribution boards. The total connected load is 1,050kW. Lighting is in the main by 8ft. purpose-made fluorescent lighting fittings giving a required intensity of illumination of 25 s.c. in the factory areas.

Fully automatic push-button control two-speed goods/passenger lifts each of 2-ton capacity are provided; and there are two electric hoists run on mono rails—one of 1 ton and one of 2 tons. A pneumatic carrier system is installed between selected points.

To provide for certain essential services a 150kW. diesel generator is installed to take over should the public electricity supply fail. It includes push-button starters.

The ventilation of the kitchen and wash-up area is by extract fans in the roof. The special anti-condensation ceiling is heated by an embedded electric coil and no individual canopies are provided.

Designers and Contractors

Estimated to cost £400,000, the building was designed by the Chief Architect's Division of the Ministry of Works. The main contractors were Wilson Lovatt and Sons, Ltd., London, S.W.1.

Principal sub-contractors included the following: Asphalt, General Asphalt Co.; balustrading, railing and steelwork, W. H. Gaze and Co., Ltd.; collapsible gate, Bostwick Gate and Shutter; demolition, Willmett Bros., Ltd.; Duromit floors, Hastkell Robertson, Ltd.; electrical installation, Troughton and Young, Ltd.; glazing and dome lights, Faulkner Green; metal decking and bitumen roof, D. Anderson, Ltd.; painting, J. H. Kenyon and Sons, Ltd.; pavement lights, Jenner, Ltd.; plumbing, Grocock and Day; precast roof, Shockcrete Products; Pyrock plaster, Pyrock Contracts (Midlands); glazed tiles, Carter and Co.; rubber doors, Rubbarite, Ltd.; steel rolling shutters, Haskins Rolling Shutter; standard patent glazing, Standard Patent Glazing Co.; heating, Hopes Heating and Engraving; terrazzo, Alpha Mosaic; thermoplastic floor tiling, Semtex; ventilation, Supervents, Ltd.; joinery, W. H. Gaze and Son; lifts, Evans Lifts.



Members of the Incorporated Association of Architects and Surveyors, with their president, Mr. P. Russell Walker, seen during a recent visit to the B.B.C. Television Centre, White City, London. Their two-and-a-half hour tour began with a detailed explanation of the design of the building given by the architect, Mr. W. H. Lindsay

PROGRESS AT SIZEWELL

World's Largest Type Cranes to be Used

WORK is ahead of schedule at the 580-MW. nuclear power station which is being built for the Central Electricity Generating Board by the English Electric, Babcock and Wilcox, Taylor Woodrow atomic power group at Sizewell, Suffolk, where some of the largest and most powerful plant in the country is now being assembled.

This includes the largest cranes of their type in the world,—a 10-ton capacity free-travelling Peine tower crane, weighing 200 tons and one of two made to Taylor Woodrow's special requirements in Germany, and the 250ft. high 400-ton capacity Goliath crane made by Babcocks which is now arriving at Sizewell for re-assembly, after having been used in the erection of the 500-MW. nuclear power station at Hinkley Point, Somerset.

At present the Peine crane is operating at reduced height but, when fully erected, the height from ground level to mast top will be 220ft., and with the lifting boom raised to its limit the maximum height will be 320ft. The crane is unusual in that it "builds" itself by a hydraulic lifting device, which raises the mast sufficiently to enable an extra 15ft. section to be inserted, the entire operation taking less than three hours. The additional sections are inserted at the bottom and not at the top of the mast, as is conventional with other cranes.

Electrically operated, with a total of 300-h.p., and Ward Leonard control for hoisting motion, the crane is capable of lifting a maximum load of 10 tons (5 tons at Maximum radius of 164ft.), and is mounted on its own rails.

After testing in Northern Germany, it was shipped direct from Hamburg to Lowestoft by a specially chartered vessel, and a second identical crane is expected on site shortly from the same manufacturers, Norddeutsche Maschinen-und, sohrenwerke AG, Peine, Hanover.

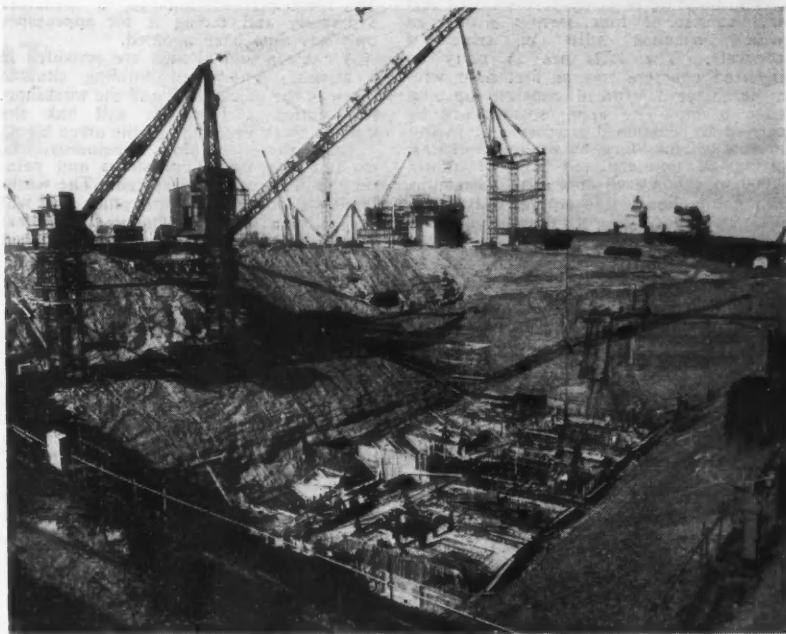
Foundations are half completed for the Goliath crane, and already several loads of components have arrived on the site at Sizewell for re-assembly. When erected this huge crane, capable of lifting loads up

to 400 tons, will appear as a new landmark on the East Anglian coast.

The Reactors

Progress on the two reactors is about six weeks ahead of programme and already their outlines are taking shape; the ex-

shield walls for No. 1 reactor are well advanced, while work has begun on the shield walls for No. 2 reactor. Most of the excavation has been completed in the pump house, through which 27 million gallons of water an hour will be pumped for the condensers, and the concrete is



Construction of foundations for cooling water pumphouse

treme compactness of the station—which will have the most powerful reactors so far ordered in the world—can now be seen. The eight feet thick foundation raft for both reactors and all the boiler houses has been completed, the concrete protective

being placed for the foundation slab. As work is being carried out 30ft. below sea level, "dewatering" has been achieved by deep well pumps, each pumping at least 30,000 gallons an hour.

(Concluded on next page)



General view of work in progress on the reactors. At the back of reactor 2 can be seen the Peine crane

WORK BEGINS ON SAND AND GRAVEL FIRM'S HEAD OFFICE BUILDING

R.C. Stilts Carry Four-storey Block

WORK has commenced on the erection of the new head office in Delamere Road, Cheshunt, Herts, for St. Albans Sand and Gravel Co., Ltd., and associated companies.

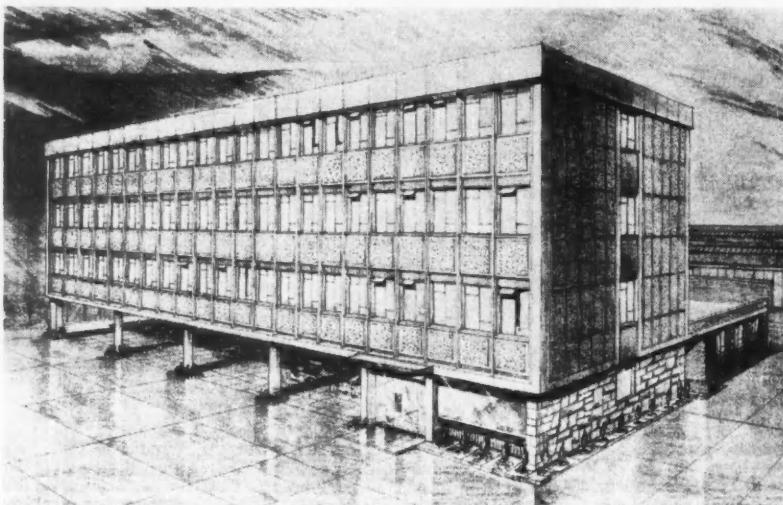
The building is partly prefabricated and will consist of four storeys sitting on widely spanned stilts in reinforced concrete. The stilts are to carry an inverted concrete tray as first floor with a perimeter reinforced concrete upstand edge beam. The upper storeys will be carried by combined precast and in-situ narrow columns forming window mullions, giving an uninterrupted area of nearly 3,000 sq. ft. on each floor with a beamless and columnless clear span of 32ft., with perfectly flat ceiling. No false ceilings will be incorporated. This is to allow for the

utmost flexibility for present or future internal divisions.

The main elevations will show precast concrete panels in various exposed aggregates, catering for both the appearance and structural support at the same time. The principle of building a structure separately and facing it for appearance only has thus been avoided.

A canteen and kitchen are provided in a separate one-storey building situated between the office block and the workshop. In addition a food lift will link the kitchen to all the floors of the office block.

The whole building, including the maintenance workshop, stores and paint shop, will be centrally heated. The workshop will adjoin the head office and will have a span of 85ft. The use of a steel portal frame has been adapted to avoid



An artist's impression of the new building

(Concluded from previous page)

Two tunnels are being driven out to the cooling water intake which will be some 1,800ft. off shore. In the north tunnel 240ft. has already been driven, and work on the south tunnel is also well advanced. Both tunnels are being driven in sand, and compressed air is being used for ventilation purposes.

In the turbine house, which will have two English Electric 325,000-kW. turbo-alternators, all the bulk excavation has been completed, and work is going ahead on the inlet culverts for the circulating water and on the foundations for the walls. Work on the turbo-alternator block foundations is soon to begin. Fabrication sheds for the two 63½ft. diameter steel reactor pressure vessels and the eight boiler shells, which will be welded on site, are being erected.

Initial Work

Initial work comprised laying about 2½ miles of concrete based roads, the construction of sewage works, a camp to hold 400 men which has already been completed and is now occupied by about 170 men, a canteen, site offices, plant shops, carpenter's shop and auxiliary buildings. The labour force, which will eventually rise to a peak of 2,000, now numbers about 1,000 men, a substantial proportion of whom are drawn from the surrounding districts.

Meanwhile, in the works of the group member companies, work is proceeding on the manufacture of the heavy mechanical engineering, electrical and nuclear plant

components. At their Dalmuir Works in Scotland, Babcock and Wilcox are well advanced in the shaping and pre-forming of the 4½in. thick steel plating for the two 63½ft. diameter reactor pressure-vessels, and the first loads of plate sections will soon be transported to Sizewell for site-fabrication into the circular ring-courses forming the spherical vessels. Shop fabrication is also proceeding at these works on the 22ft. 6in. diameter ring-sections for the eight 91½ft. high boilers, and the first shipments of these ring-sections will soon be arriving at South Quay, Lowestoft, for transport to site and final fabrication and erection.

Favourable weather has contributed to the rapid progress, which has been observed by over 12,000 sightseers who have visited the public observation platform since it was opened for the August Bank Holiday weekend.

Work began on site on April 4 last and will supply power to the national grid in 1965. Sizewell will have the highest output of any nuclear power station so far being built in the world and, the seventh station to be ordered in the United Kingdom, it will bring the total power of Britain's nuclear stations to 3 million kW, some 10 per cent. of the country's present total generating capacity, of which the group's two stations will provide one-third of the nuclear capacity.

The group resident superintendent is Mr. John Thornton and the Taylor Woodrow site agent is Mr. V. Blondell.

roof trusses, with the consequential wasteful heated airspace.

The workshop will contain both pit and hoist facilities in addition to other appliances to maintain the standard of fleet maintenance and readiness essential to the operation of the company's timed delivery service.

The total area of all buildings in the development will be 34,727 sq. ft., and in addition, a concrete paving area of 28,000 sq. ft. with washing facilities will be provided. The total cost will be £103,000, and the contract is to be completed in 49 weeks.

St. Albans Sand and Gravel Co., Ltd., will supply their own aggregates, sand, gravel and ballast and will be employed as sub-contractors for the provision of excavators, bulldozers, etc. Concrete for the project will be supplied from Ready-mix Transite plants located on St. Albans pits.

Consultants and Contractors

The architect responsible for the development is Mr. Adam Gelister, D.I.C., A.R.I.B.A., 21 Maddox Street, London, W.I. The structural engineers are R. T. James and Partners, 6 Lower Grosvenor Place, S.W.1, and the quantity surveyors are Leslie A. Keats and Partners, 14 Fitzroy Street, Fitzroy Square, W.I.

The contractors are Townsend and Collins, 129 Goat Lane, Enfield, Middlesex.

BUILDING SURVEYORS' ANNUAL GENERAL MEETING

The ninth annual general meeting of The Building Surveyors' Institute took place in London recently.

In his address the retiring president, Mr. S. C. Greatrix, stressed the importance which the Council attached to the liaison established with other professional institutes, whereby matters of common interest are discussed. He expressed the hope that an extension of this liaison would be established in the future. The policy of co-operation with all concerned with surveying and building was one of the Institute's main aims, and it was becoming vital to the building industry that such co-operation became more widespread.

The president also referred to the improvement in relations with the technical colleges and expressed the gratification of the Council to those colleges who were actually assisting the Institute by organising suitable courses for students.

Tribute was paid to the work of Regional and Area Committees and the close co-operation between them and the Secretariat in London. The establishment of new Areas was most encouraging and on behalf of the Institute he congratulated the New Zealand and South African Branches on their enthusiasm and support.

Mr. Greatrix then formally presented his successor, Mr. Bernard F. Goodman, who later welcomed the new members of Council: Messrs. C. Crawford (Scotland), D. A. Roberts (Birmingham) and R. J. K. Telling (Bristol) and introduced to the meeting the new senior vice-president, Mr. Donald Wood of Region No. 2 and the new junior vice-president, Mr. George Chequers of London.

1962 A.C.I. CONVENTION

Plans are well advanced for the 58th annual American Concrete Institute convention to be held at the Brown Palace Hotel, Denver, Colorado, March 12-15, 1962, reports Mr. Walter H. Price, chief research engineer of the U.S. Bureau of Reclamation, Denver. Mr. Price, a past president of A.C.I., is chairman of the convention committee.

Special events supplementing the technical programme will include an architectural concrete design contest, the annual A.C.I. awards luncheon, and a tour of the U.S. Bureau of Reclamation Engineering Laboratories.

CROWN BUILDING COMPLETED AT SOUTHEND-ON-SEA



The new Crown office building

MR. RICHARD THOMPSON, Parliamentary Secretary, Ministry of Works, last week handed over a new Crown office building at Southend which provides local office accommodation for the Ministry of Labour, the Ministry of Pensions and National Insurance, and the Board of Inland Revenue.

The problem of grouping in one building as economically as possible several sections of different Government departments, each requiring contact with the public to widely varying extents, was complicated by difficult site conditions in the form of a rubbish-filled gravel pit to the rear of the site. This influenced the shape and siting of the building, as well as limiting the working space during construction. At the same time, the Ministry of Works

was called upon to provide an office block tailored to current requirements, but capable of being easily re-arranged internally to suit possible future changes of accommodation.

The plan evolved was for a six-storey block sited close to the frontage with all floors repeating, at one end, a staircase, lifts and lavatories and, at the other end, a staircase only; the remaining floor space was divided to suit particular requirements.

The structural grid of 14ft. 8in., broken down into three window mullion bays, was found to be very adaptable to partitioning and allowed the use of standard 4ft. 7in. counters between columns.

The Ministry of Labour, whose employment exchanges have the greatest influx of people, is located on the ground and first floors and has separate entrance doorways. The Ministry of Pensions and

National Insurance and three Inland Revenue sections are allocated the upper floors, and are usefully segregated, floor by floor. The public and staff share the main entrance, staircase and lifts.

The top floor accommodates common services such as conference room, canteen, telephone switchrooms, etc., and here the partitions are of a more permanent nature. There is also an open paved roof deck accessible from the canteen.

Car parking for 61 vehicles has been provided at the rear of the site. The original design included a broad turf-covered forecourt, but this has now been omitted and a service road substituted to agree with the development proposals of the local authority.

Elevation and External Finishes

Expression has been given to the various uses to which the building is being put by differing the external treatment between the ground floor's main interviewing space, the intermediate floors' general offices, etc., and the top floor's common or staff welfare services.

The front and rear elevations are framed with Portland stone. Floor bands are of ribbed-faced concrete produced by lining the formwork with plastic sheet having a ribbed profile and painted off-white. Columns are fair-face concrete painted brick red from first to fifth floors.

Pressed steel infilling panels below sills contain grey-green insulating glass, backed up with lightweight concrete blocks to form an internal flush face with the columns.

Ground floor solid panels are finished with grey tiles below sills and dark blue at the entrances, whilst columns and flank walls have a silver-grey Tyrolean finish. Flank walls are faced with yellow stock bricks above ground floor-level.

Walls and ceilings, generally, are plastered and painted, although areas of washable wallpaper have been used to add interest to the public spaces, as well as metal strip acoustic ceilings.

Floors of the entrance halls are laid in terrazzo, whilst stairs and landings have a vinyl plastic surface, with plastic-filled aluminium nosings to the treads. Floors, generally, are finished with lino, except in the kitchen and lavatories, where clay floor tiles and grano have been used respectively. The building is founded on a good



Interior view of part of the ground floor

gravel sub-soil and has a basement constructed in reinforced concrete.

The frame is of flat slab construction supported on external and on twin spine columns, the latter being placed symmetrically on either side of a central 6ft. wide corridor.

The columns are spaced at 14ft. 8in. centres down the length of the building and at 19ft.-6ft.-19ft. centres across the width. This gives a floor panel size of 19ft. by 14ft. 8in.

The outer floor panels are of hollow tile construction, and the remainder are solid in the spine and edge strips, and in the transverse strips between the columns. All floors are 8in. thick.

The basement extends the full length of the building and just over half the width. It is constructed in watertight concrete, that is, without the aid of any damp proof course or bituminous membrane.

The building is stiffened against wind racking forces by end cross walls, and by stair and lift towers. Reinforced concrete generally has a strength of 4,000lb. per sq. in. at 28 days.

Services

Engineering services comprise heating, domestic hot water, canteen, electric lighting, power, clocks and bells, telephone ducting, electric lifts, etc.

The heating load of approximately 1,250,000 B.Th.U./hr. and the domestic hot water (in the winter months) are catered for by two boilers of approximately 827,000 B.Th.U./hr. each. In summer, domestic hot water is provided by a boiler of approximately 200,000 B.Th.U./hr. rating. In both cases, the hot water is supplied via a calorifier. All boilers are oil-fired, using 250 sec. oil, and control is fully automatic on an "on/off" basis with depressed temperature working at night and over the week-end.

Heating is on the single pipe pumped system, pumps in duplicate, and is divided into three zones each controlled by an outside compensator operating a mixing valve blending boiler flow and return water. Heat radiation is by a combination of "sill line" units in public spaces, surface panels on stairways and hospital-type radiators elsewhere.

Electric lighting is generally by tungsten filament lamps. Meters and main switch-gear are housed in the basement, fed via a supply authority transformer sub-station situated in the yard at the rear of the building. Distribution of lighting and power is on the fan system with a sub-distribution board on each floor. Power supply is provided to electric lifts, pumps, kitchen machinery, an ample supply of

13-Amp socket outlets on ring main circuits, some electrically heated incinerators in some female toilets, etc. Estimated minimum electricity demand is 150-kVA.

Electric lifts comprise two passenger lifts and one goods lift. The passenger lifts are each of 10-passenger capacity to operate at a speed of 250 f.p.m., serving all floors from the basement to the fifth floor inclusive, on a dual collective control system with motors and control gear housed on the sixth floor. The goods lift of 784lb. capacity operating at a speed of 100 f.p.m., serves all floors from ground to sixth floor inclusive, with automatic push button controls and with motors and control gear housed in the basement.

The canteen is designed to provide up to 120 main meals per meal period, and also caters for tea trolley service. Extract ventilation and valances are provided over main cooking appliances in the kitchen.

Fire protection facilities comprise foam inlets to boiler and oil storage accommodation, first-aid hose reels, two- and one-gallon extinguishers of foam and water types, sand buckets and smothering blankets positioned at strategic points throughout the building.

A booster unit is coupled in the cold water supply service to provide adequate drinking water to upper floors and kitchen and to feed cold water to storage in the roof.

A telephone switchboard, situated on the sixth floor, is linked by a vertical duct with underfloor ducting on each floor which, in turn, links with skirting level wall ducting to provide telephone service throughout the building.

Lightning protection is provided by an air terminal on both the flagpole and the chimney with a single down tape to a network of copper rods driven into the ground.

Clocks in entrance halls and on main landings and in the larger public and staff rooms are of the synchronous type. On certain public counters call bell pushes are provided with bells situated in the clerical spaces screened from the counter.

Drainage Design

The drainage design for this scheme was on the separate system. It was impossible to drain the low yard area into the surface water sewer and this was dealt with by soakaway. The materials for the drainage system are stoneware and cast-iron.

Plumbing is of orthodox design in cast-iron and copper; and spray mixing taps have been fixed to all lavatory basins. Wastes from the spray tap basins are

smaller in diameter than usual and have been fixed on an experimental basis.

Owing to the fluctuating daytime pressures of the existing water mains a 24-hours' supply of water is accommodated on the roof. Water for diabetics purposes and fire hose reels on all floors is obtained from a boosted supply. All cold water services are in copper.

Designers and Contractors

The building was designed in the Chief Architect's Division of the Ministry of Works. Senior architect—E. H. Banks, F.R.I.B.A., F.R.S.A.; architect—H. A. Cook, A.R.I.B.A.; senior structural engineer—R. J. R. Hancock, M.B.E., A. M. I. C. E., A. M. I. Mech. E.; senior mechanical and electrical engineer—J. J. Taylor, A.M.I.E.E.; senior public health engineer—R. A. Parker, A.M.I.C.E., A.M.I.W.E., M.I.P.H.E.; supplies officer—C. H. Gadsby.

The main contractors were Higgs and Hill, Ltd., Crown Works, South Lambeth Road, London, S.W.8.

NEW CIVIC BUILDINGS FOR DUNSTABLE

A large area of park land to the rear of the new High Street North shopping development has been chosen by Dunstable Borough Council as the site for a civic centre with assembly hall, town hall and other buildings; a county library, law court buildings and large car park are to share the site.

First stage in the civic centre development is to be an assembly hall designed to meet the immediate and future needs of the town. The hall, which may be used for symphony concerts, cinema shows and theatrical performances, may also be used for banquets and dancing by closing off the stage and proscenium arch.

Included in the accommodation will be a small hall; this will be used as a temporary council chamber until the new town hall is built.

The main hall will be capable of seating 750 people or accommodating 500 for banqueting and dancing.

As designed, the elliptical reinforced concrete walls of the auditorium are lined in special acoustic hardwoods and the whole is surmounted by an elliptical aluminium dome 100-ft. long. It will have a hardwood semi-sprung floor and a moulded acoustic plaster ceiling.

The structure of the foyers, bars, restaurant, etc., which surround the auditorium is of reinforced concrete faced externally with glass, reconstructed stone, and local bricks.

The grand stair to the first floor is lined in mosaic with terrazzo treads and risers. The floor finish to the foyer area is expected to be terrazzo, while the restaurant will be carpeted.

The total ground floor area is 27,000 sq. ft. and the completed building to the top of the dome will be 50ft. high.

Architects are Shingler and Risdon, of London.

FOREMAN RETIRES AFTER 52 YEARS' SERVICE

After completing 52 years' service with Higgs and Hill, Ltd., London, S.W.8, 43 years of which have been spent as a general foreman, Mr. W. F. Valentine has retired.

Aged 77, Mr. Valentine joined the firm in 1909, and during his career he has been associated with many large contracts, some of which have been of great complexity. His last job with the firm has been in connection with the Medical School extension at St. Mary's Hospital, where excavation work has been carried out to exceptionally fine tolerances.

At a recent farewell ceremony arranged by the company, Mr. Valentine was presented with an armchair and an electric fire. Site workers from his last contract are giving him an electric drill.



The main entrance

GROWING USE OF STAINLESS STEEL IN ARCHITECTURE

From a Correspondent

IN the same way and indeed for many of the same reasons that the domestic use of stainless steel is spreading outside the kitchen into the living rooms of the home, so are architects now beginning to use stainless steel for major structural applications on buildings rather than merely as shop window decor.

Modern developments in multi-storey buildings and curtain walling are largely responsible for this use of stainless steel, and an increasing number of new buildings have been completed in the last few years with a glittering facade of polished stainless steel. Among several in London, the most obvious is perhaps the Millbank Development project, rising nearly 400ft. above the Tate Gallery.

Stainless steel curtain walling is developing rapidly in Europe, as travellers to Dusseldorf and Paris can testify, and it is thought by the steel industries of both Europe and the U.S.A. that the architectural field is one of the most promising long-term markets. Some 50,000 tons of stainless steel will be consumed for building purposes in the U.S.A. in 1961. Sheet

and strip alone will take as much as 70 per cent. of the entire British output of these products for all purposes.

Because stainless steel is a relatively expensive material, many architects and property owners are inclined to discount its use in Great Britain without a thorough investigation of its potential advantages. Yet, by careful design, most of the buildings so far erected were not greatly increased in cost by the use of a material which has a fine soft metallic lustre and takes no trouble to keep clean, especially as this is largely done by the weather anyway.

From time to time, the query is raised whether stainless steel is in fact stain-free in building applications. Sufficient evidence of this, going back nearly 30 years, exists in the U.S.A. to establish this beyond all question, providing it is regularly cleaned of the more sticky deposits of dirt, containing chlorides or sulphates. In fact, washing is all that is

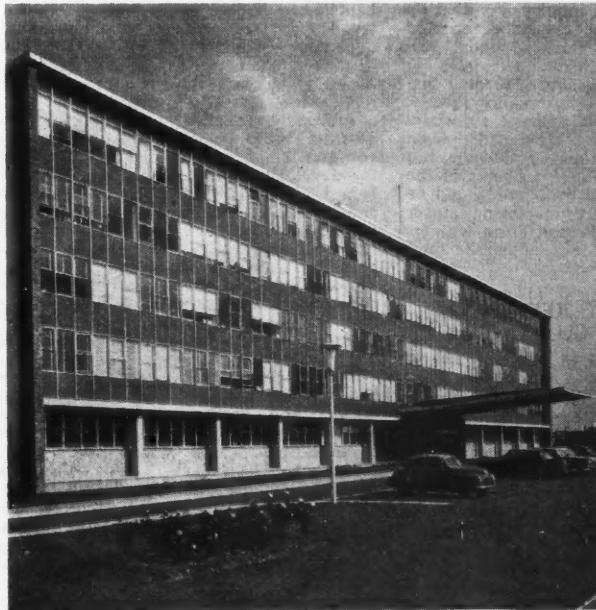


Stainless steel is a feature of the drawing offices and canteen block of Steel, Peech and Tozer, Rotherham

usually needed for cleaning and the appearance of a building will be governed rather by adhering dirt than by any rust stains due to neglect.

However, even the possibility of pitting or slight staining can be guarded against by using a more corrosion-resistant stainless steel, containing an additional alloying element of molybdenum. Such an alloy resists all conditions of service and even with no cleaning there is no deterioration of the metal. This quality is used almost invariably in the U.K., although in the U.S.A. it is specified only for coastal applications.

British urban atmospheric conditions are
(Concluded on page 77)



Other examples of stainless steel in architecture: (Left) executive offices for Pfizer, Ltd., Sandwich, Kent; and (right) design offices for Coventry City Architect's Department

GO-AHEAD FOR £1M. A.8 IMPROVEMENTS

THE Secretary of State for Scotland has authorised work to start on the improvement of about 5½ miles of the Edinburgh-Glasgow trunk road (A.8), between Newhouse and Baillieston in Lanarkshire.

This is the first of a series of schemes, to be authorised under the current Trunk Road programme, which will provide a dual-carriageway route between the two cities. It provides for the construction of dual 24ft. carriageways, with three grade-separated junctions at Newhouse Industrial Estate, Shawhead Roundabout and Rosebank House, together with accompanying slip roads, to allow traffic to cross or enter the trunk road safely.

A number of minor side roads will be stopped-up and vehicles will no longer be able to enter or leave the trunk road by them although pedestrians will still be allowed to do so.

The successful contractors are Duncan Logan, Ltd., Muir of Ord, Inverness-shire, and the work will be supervised by Lanark County Council as the Secretary of State's agents. The scheme is estimated to cost £1,070,000 and is expected to take about two years to complete.

£6M. ERITH REDEVELOPMENT PLAN APPROVED

Plans for the redevelopment of Erith town centre have been approved by the Borough Council. The scheme, to be carried out by Park Investments, Ltd., 98 Park Lane, London, W.1, involves the reconstruction of more than 25 acres at an estimated cost of nearly £6m.

Included in the scheme are a large departmental store and a supermarket with car parking space for 750 vehicles. In addition approximately 100 shops, together with flats and maisonettes will be erected, as well as banks, public houses, office blocks, club facilities, riverside point-block flats, a terraced promenade and a garage and filling station. Although the actual shopping precinct is approached by five major roads, it will be free from traffic.

Architects for the scheme are Richard Seifert and Partners, 34 Red Lion Square, London, W.C.1.

DARLINGTON BY-PASS BRIDGES CONTRACT

Durham County Council, acting as agent authority for the Ministry of Transport, have accepted the £226,796 tender of Cementation Co., Ltd., Bentley Work, Doncaster, for the advance construction of bridges on the route of the Darlington bypass, part of the Durham Motorway.

Two bridges are included in the contract, one to span the River Tees and the other the Darlington-Barnard Castle branch railway. The bridge over the River Tees will be a three-span construction, supported on piled foundations, with a total width of about 250ft. between abutments. The railway bridge will have a single span of about 30ft.

Work will commence within a few weeks, and is due for completion within 18 months.

BRITISH ROAD TAR ASSOCIATION Election of Officers

The following elections were made at the annual meeting of the British Road Tar Association held on Tuesday: President—Mr. R. G. Baker, deputy chairman, North Eastern Division, National Coal Board; vice-presidents—Mr. E. Peter Butler, chairman, Bristol and West Tar Distillers, Ltd. and Mr. R. N. Bruce, chairman, South Eastern Gas Board; honorary treasurer—Mr. R. H. E. Clark, director, South Eastern Tar Distillers, Ltd; Chairman of Council—Mr. L. W. Blundell, controller of by-products, North Thames Gas Board.

NEWCASTLE COLLEGE BUILDINGS TO COST £600,000

Start Made by John Laing

WORK has just been started on a £600,000 scheme for the erection of a new refectory and students' union extension at King's College, Newcastle upon Tyne. John Laing Construction, Ltd., are the contractors for the project, which includes a new south-west extension and facade to the existing Union building, a ballroom and a debating chamber. The work is due for completion in the autumn of 1963.

A feature of the scheme will be a 170ft. long "flying wing" of reinforced concrete construction, poised on four concrete columns spaced 22ft. 6in. apart and 99ft. lengthways. The architects are Raglan Squire and Partners and William Whitfield, 3 Hobart Place, London, S.W.1.

ARMAGH MOTORWAY TENDERS

As reported last week, Armagh County Council has accepted the £1,938,852 tender of Thomas Lowe and Sons (Carryduff), Ltd., for the construction of a further section of the T.3 Motorway between Verner's Inn and Birches.

The *Contract Journal* now understands that tenders were also submitted by: City Contractors and Plant Hire Co., Dunmurry, £1,973,583; Farrans, Ltd., Dunmurry, £2,176,253; Sir Alfred McAlpine and Son (N.I.), Ltd., Belfast, £2,442,167; White and Co., Belfast, £2,523,459; John Graham (Dromore), Ltd., £2,573,406; Leonard Fairclough, Ltd., Adlington, Lancs., £2,598,072; Dowsett Engineering Construction, Ltd., Gateshead, £2,810,539.

Work is due to commence at the beginning of December, and the resident engineer is Mr. J. J. MacAleenan, 3 Charlemont Place, Armagh. The consulting engineers are Robert F. Earley and Partners, London.

NATO RADIO STATION AT ALNICK APPROVED

The Government has announced its approval of the Air Ministry's plan to build a radio station at Newton Point, near Alnwick, Northumberland, as part of a NATO navigation system. The station will consist of a slender aluminium mast, 130ft. high, a 67ft. timber pole, technical and domestic buildings and a stand-by power house.

There were many objectors to the scheme, when a local inquiry was held on September 6, but the inspector reported to the Minister of Housing and Local Government that the choice of a site for the station was limited, and it seemed that the Air Ministry had thoroughly investigated the possibility of siting it elsewhere on the stretch of coast. He stated that on all sites the mast would be noticeable, but he did not think that a single mast of the lattice type and height proposed would be likely to have a seriously damaging impact on the landscape at Newton Point with its extensive views.

TEES-SIDE OIL REFINERY CONTRACT

As exclusively reported in *The Contract Journal*, October 19, I.C.I., Ltd., have awarded a multi-million pound, fixed-price contract to Kellogg International Corporation, London, for the complete design, procurement of materials, engineering and construction of a crude oil distillation plant on the North Bank of the River Tees.

The new plant will be capable of processing a million tons of crude oil a year. Construction will commence in the spring of 1962, and the unit should be in full operation in 1963.

This development means that I.C.I., Ltd., will now be able to handle crude oil. It has been decided by agreement that Shell-Mex and B.P., Ltd., will supply the refinery with the crude oil for processing.

Late Construction News

STOCK EXCHANGE REBUILDING.—The rebuilding of the London Stock Exchange, which is likely to cost about £6m., is to be entrusted to Trollope and Colls, Ltd., 1 Nobel Street, London, E.C.2. The contract will involve simultaneous demolition and rebuilding, and because of its complexity the Council of the Stock Exchange decided not to invite tenders. The architects are Prof. Richard Llewelyn Davies, 36 Parkhill Road, London, N.W.3, in association with Fitzroy Robinson and Partners, 3 Gray's Inn Square, London, W.C.1. Work is expected to start in early 1963.

BIRMINGHAM COLLEGE CONTRACT.—Birmingham Education Committee have accepted the £694,171 tender of the city's direct labour department for the first phase of the new college of arts and crafts at Gosta Green. This stage provides for four and five-storey buildings surrounding a paved court and ornamental pool. In a later stage a 17-storey block is to be built. Plans are by the city architect, A. G. Sheppard Fidler.

HARLOW HOSPITAL TENDERS.—Selected contractors are now being invited to tender for the second stage of the Harlow New Town Hospital at Hamstel Road, for the North East Metropolitan Regional Hospital Board. The architects are Easton and Robertson, Cusdin, Preston and Smith, 53 Bedford Square, London, W.C.1, working in association with the regional architect to the board, W. G. Plant. The quantity surveyors are Hamilton H. Turner and Son, 19 Queen Anne's Gate, London, S.W.1.

SHOREDITCH DWELLINGS.—Subject to Ministry approval, Shoreditch B.C. are to accept the following tenders: 91 flats in three blocks, one of 16 storeys, 36 garages, a public house and office accommodation at Charles Square Estate—Tersons, Ltd., 4 Dollis Park, London, N.3, £403,000; 128 dwellings in five blocks and eight garages at St. John's Estate—Herbert Richardson and Sons, Ltd., Slade Green Road, Erith, Kent., £323,666.

CHATHAM SCHOOL.—Matthew James and Co., Ltd., 15 Thayer Street, London, W.1, have been awarded a £235,000 contract to build the St. John Fisher School at Chatham, Kent, for Southwark Diocesan Schools Commission. The school has been designed by David Stokes and Partners, 5 Cochrane Street, London, N.W.8. Davis, Belfield and Everest, 9 Ashley Place, London, S.W.1, are the quantity surveyors.

£650,000 COLLEGE BUILDING.—W. H. Jones and Son, Ltd., Lockhurst Lane, Coventry, recently began work on a £650,000 contract for phase 4.A.D. of the Lanchester College of Technology, Coventry. The contract provides for a 540ft. long, five-storey building, framed in reinforced concrete. Plans are by the city architect, Arthur Ling, and the structural engineer is Granville Berry, city engineer.

EIGHTEEN-STORY OFFICE BLOCK.—An 18-storey office block, public library and conference hall are included in a £1m. plan for development in Euston Road, London, N.W.1. The developers, Estates Property Investment Co., Ltd., have been granted planning permission for the site which is adjacent to St. Pancras Station. The architects are Devereux and Davies, 3 Gower Street, London, W.C.1, and the consulting engineers are L. L. Kenchington and Partners, 195 Great Portland Street, London, W.1. Contractors have yet to be appointed.

MANCHESTER HOUSING.—Manchester City Council propose to accept the tender of Roy and Partners, Ltd., Salford, for building 281 dwellings at Hadfield, Glossop, at an estimated cost of £648,638.

HARLOW DISTILLERY.—*The Contract Journal* understands that Holland & Hannen and Cubitts (G.B.), Ltd., are to be awarded the contract for building a new vodka distillery, storage and bottling warehouse at Harlow New Town, for W. and A. Gilbey, Ltd. Estimated cost of the project is £750,000. The designs are by Peter Falconer and Partners, Imperial House, Stroud, Glos., in conjunction with Alexander Gibson of Design Research Unit, 37 Duke Street, London, W.1.

SKYSCRAPER CONSTRUCTION IN EDGWARE

Wates 14-storey Office Development

ONE of London's highest buildings is now being erected by Wates, Ltd., at Station Road, Edgware, for the Churchgate Property Co., Ltd.

A 14-storey block of shops and offices, the building has been designed by architects John D. Morgan and David C. Branch A./A.R.I.B.A., for a site acquired from British Railways. The area was formerly a goods yard; it also included a station house, yard offices and, on the Station Road frontage, a rank of kiosk-type shops.

Plan

The building will consist of a two-storey podium of eight shops and offices, with a central 12-storey tower block of offices rising above the podium to a height of 140ft. It will have a 200ft. frontage in Station Road, an overall depth of 115ft., and a central tower measuring 78ft. by 90ft.

On the ground floor there will be seven single unit shops and a triple shop unit with first-floor area above.

Internally the office accommodation has been designed on an open plan basis to permit ease of partitioning by tenants. With a gross area of 121,280 sq. ft., a net lettable area of 78,000 sq. ft. of offices and a plot ratio 1:2, it will have an occupational ratio of one person to 80 sq. ft.

The development will be encircled by a ring road which leads, at the rear, to a car park for 162 vehicles.

Construction

Designed to a 3ft. module, the tower block will be of reinforced concrete frame construction on piled foundations. The architects have adopted an American constructional idea by incorporating the lifts, services and staircases in a central reinforced concrete core.

The reinforced concrete columns will be cast in situ. Straight bars will be widely used in the reinforcement system. The floors will be in-situ concrete with hollow tile panels.

The roof will be made up of asphalt laid on Isocrete, a lightweight insulating screed.

External Finishes

The tower block will be clad with 3ft. and 6ft. panels of white vitrolite aluminium curtain walling and the two-storey podium with dark blue Muro-glass. The glass cladding and window lights will have a total superficial area of 44,000 sq. ft., including 20,000 sq. ft. of Muro-glass and

white vitrolite aluminium cladding. Fourteen thousand square feet of clear 32oz. glass and 10,000 sq. ft. of $\frac{1}{4}$ in. polished glass will be used for the window lights.

A feature of the south-western elevation of the podium will be the patterned brickwork. The lower half of the facing will be finished with dark blue flints. Above this, light grey flints will be broken with rectangular patterns in dark blue flints and white glazed bricks.

An 18ft. canopy will project over the main entrance, the fascia finished with white marble and the underside with polished cedar. The main entrance will consist of four armoured glass doors set in white marble.

The main entrance foyer will be faced with panels of mirrored glass and Italian mosaic. Its ceiling, incorporating recessed lighting, will be finished with polished cedar extending back into the foyer from the underside of the external canopy. The floor will be finished with terrazzo.

The staircases will be generally finished with plastic tiles, and fitted with plastic handrails. The ceilings will be plastered, and the floors will also be finished with plastic tiles. In the toilet accommodation, Linotol will be used for the floors.

Services

The central core of the building will be air conditioned by a fresh air induction system.

The building will be heated by electric convector heaters and hot water will be provided by gas-fired boilers installed on the roof of the development.

The tower block will be served by two high-speed passenger lifts travelling at 300ft. per minute.

Ventilated toilet accommodation will be provided at each floor level, and will be situated within the central core.

The consulting engineers are Mark H. Smullen and Partners, and the quantity surveyors, Lane and Jewell.

The contract, valued at £395,296, is scheduled to be completed in February 1963, a contract period of 78 weeks. The Wates site agent is Mr. A. W. Mansfield, Architect in charge H. M. Warren, A.R.I.B.A.

Sub-contractors

Sub-contractors for the scheme include: Piling—The Cementation Co., Ltd.; cast-iron drainage, ventilation, cold and hot water plumbing, sanitary fittings and waste plumbing.

dry riser, rain water plumbing and gas service—Mumford, Bailey and Preston, Ltd.; asphalt roofing and Isocrete screeds—H. V. Smith and Co., Ltd.; thermoplastic tile paving—Semtex, Ltd.; Linotol flooring—E. B. Trumper; terrazzo floor and tiles, w.c. partitions, mosaic wall linings—St. James' Tile Co., Ltd.; marble wall linings—Marmi, Ltd.; hardwood strip flooring—Acme, Ltd.; ironmongery—Allgood Continental, Ltd.; mirrors—Leay Glazing; balustrades and handrails—F. A. Norris and Co., Ltd.; metal windows and curtain walling—Aygee, Ltd.; steel collapsible shutter doors—Acme Metal Works; travelling cradle and track—Palmers; electrical installation—Bective Electrical Co.; goods lift—Hammond and Champness, Ltd.; armourplate glass doors—Leay Glazing; dome lights—T. W. Ide, Ltd.

C.E.G.B. SITE SAFETY FILM

A safety film, impressive in its impact and unusual presentation, has been produced for the Central Electricity Generating Board in an effort to make operatives on the Board's many construction sites safety-conscious.

Entitled "Survival," the film is unusual in that it presents its point through the medium of a fictional story, and in miniature, all the ingredients of the successful feature film have been employed, including romance, a fight scene, and villain. The accident around which the story is based, consisting of a fall from the steelwork of a power station, is shot in a harrowing scene which must undoubtedly have the desired effect on those who may find themselves working under similar conditions.

Photographed in black and white, "Survival" runs for 23 minutes, and copies can be obtained from the C.E.G.B., Winsley Street, London, W.1.

WAR DEPARTMENT SCHEDULE OF PRICES

Revised adjustment percentages to trade sections of the War Department Schedule of Prices for Works Services (1948) applicable to War Department Term Contracts (other than Term Contracts for Painting and Decorating Services), also Measurement Contracts, and effective from October 2, 1961, are as follows:

Section	Trade	Percentage Addition
1	Excavator	203
2	Concreter	145
3	Bricklayer	152
4	Asphalter	78
5	Drainlayer	127
6	Mason	143
7	Pavior and Roadmaker	104
8	Roofers	124
9	Asbestos Cement Goods	117
10	Carpenter and Joiner	116
11	Ironmonger	118
12	Ironfounder, Smith and Structural Engineer	171
13	Gashfitter	157
14	Plasterer, Floor and Wall Tiler	139
15	Plumber	130
16	Electrician	114
17	Glazier	152
18	Painter and Decorator	154
19	Hutting	102

N.B. Where Section 20, Camp Structures, has been incorporated in the Contract, the Percentage Addition will be 102.

(Concluded from page 75)
gradually improving as the Clean Air Act comes into force and it is expected that eventually the standard, and slightly cheaper, stainless steel quality will be perfectly satisfactory for most applications. To be absolutely sure, however, the steel industry recommends the molybdenum bearing quality for the time being.

Five British manufacturers are now able to offer curtain wall or cladding systems in stainless steel on a commercial basis, suitable for both industrial and prestige type buildings. In addition, two companies are making stainless steel windows and a third has one in development.

Examples of these systems are to be seen at the 1961 Building Exhibition, particularly at the stand of United Steel Structural Co., Ltd., who are exhibiting in conjunction with their associates, Samuel Fox and Co., Ltd.



An artist's impression of the 14-storey block

Men and Movements

THE export manager of Ransomes and Rapier, Ltd., Mr. E. W. H. Hadfield, is making a general sales tour in Northern and Southern Rhodesia, South Africa, Mozambique and Kenya. He returns to this country via the Sudan and Egypt. During his tour Mr. Hadfield is visiting distributors and Government departments, and in South Africa he will examine the development of the truck mixer business.

Turners Asbestos Cement Co., Ltd., have appointed Mr. H. A. Pursey as London sales director, and Mr. J. E. Hutton as sales director in Manchester. Mr. Pursey has been sales director since 1955,



H. A. PURSEY

R. K. DAY

and Mr. Hutton has until recently been the director of one of the overseas asbestos cement manufacturing subsidiaries of Turner and Newall, Ltd. Mr. R. K. Day has been appointed Press officer, as well as being manager of the new London showroom. He joined the company two years ago and has been working until recently as an assistant manager in the export department.

The technical advisory service operated throughout the United Kingdom by The Key Engineering Co., Ltd., has been strengthened by the appointment of two more representatives. Mr. R. K. Ratcliff will be available to provide advice and assistance in the eastern counties on stack and underground drainage installations. Mr. G. T. Richardson will be based at the firm's London office and will be available for consultation on the Key underfloor duct and conduit systems.

Atlas Copco (Great Britain), Ltd., have appointed four more sales representatives. Serving the London area will be Mr. A. W. Kingwell and Mr. C. A. Gammon, operating from the branch office at Shepherds Bush. Mr. W. Beaumont is operating in the Leeds area, and Mr. H. Fellows in the Midlands area.

Mr. W. A. Train and Mr. F. J. Goodall, F.C.A., have been appointed to the board of W. H. Allen Sons and Co., Ltd.

Mr. Train, who joined the firm in 1925, has been works manager at Bedford since 1954. Mr. Goodall has been the company's chief accountant since 1958.

Michigan (Great Britain), Ltd., have appointed Mr. Derrick H. Younger as area sales representative in north Yorkshire. Mr. D. H. Younger has been for some years in the tractor shovel business and was previously with Bray Construction Equipment and Mathews Bros.



D. H. YOUNGER

Formerly chief accountant and secretary, Mr. W. I. Neilson has been elected to the board of directors of Lumenated Ceilings, Ltd., a member of the Hall-Thermotank group of companies.

The Fullers' Earth Union, Ltd., a member of the Laporte Industries group, have announced the appointment to their staff of Mr. E. S. Hibbert as civil engineering consultant. Mr. Hibbert will maintain an advisory service in connection with the use of the company's Fulbert bentonite.



E. S. HIBBERT

Office-bearers have been elected by the Governing Council of The British Engineers' Council as follows: Mr. E. N. Griffiths, C.I.B.A.E., chairman of Rotary Hoes, Ltd., becomes president; Mr. K. M. Leach, B.Sc., A.M.I.Mech.E., becomes vice-president; and Mr. A. I. Baker, C.B.E., M.A., M.I.Mech.E., chairman of Baker Perkins, Ltd., becomes honorary treasurer.

Vacu-Lug Traction Tyres, Ltd., have announced the appointment of Mr. A. H. Podesta as sales manager. He will be responsible for all sales matters relating to the company's range of reconditioned and remoulded tyres, and also the Mitco range of industrial tyres.

Brown and Tawse Plant, Ltd., have announced two new appointments. Mr. J. B. Fosbrooke, who has been with the organisation for several years covering the



J. B. FOSBROOKE

B. A. MACKIE

Midland and N.E. England territories, has been appointed crane sales manager for England and Wales. Mr. B. A. Mackie has joined the company as Hydrocon crane salesman in the Midlands area, where he is well known as a salesman for earth moving equipment.

Mr. L. Colkett, Mr. K. C. McCarthy and Mr. G. H. Thorlley have been appointed to the board of directors of Castrol, Ltd.

Mr. D. L. Stokes has joined the staff of the contractors' plant division of W. C. Youngman, Ltd., to promote the sales of their new climbing staging.

At the invitation of the Williams Form Engineering Corporation of America, two executives of John Lynn and Co., Ltd., are visiting Italy at the end of October. They are Mr. Arthur Marr, managing director, and Mr. Colin Larter, managing sales engineer, and the purpose of their visit will be to investigate the market potential for Williamsform ties in the building industry.

Bowmaker, Ltd., have appointed Mr. G. W. Turner, as resident representative at the firm's King's Lynn office.

Dr. Paulo Cunha Menezes, head of the division of supplies of the Brazilian National Roads Department (Departamento Nacional de Estradas de Rodagem) and his deputy, Dr. Rubens Caminha, who are currently touring Europe, recently visited the Grantham and Leicester factories of Aveling-Barford, Ltd., and their associates, Goodwin Barsby and Co., Ltd.

The Limmer and Trinidad Lake Asphalt Co., Ltd., have appointed Mr. Peter Wake a director.

Mr. H. C. Baadsgaard, sales director of Nu-Swift Ltd., has retired and resigned his directorships of Nu-Swift and its associated companies. Mr. Frank Tompkins, already a director of Nu-Swift, has been appointed homes sales director in Mr. Baadsgaard's stead.

Mr. A. J. Wakeling has been appointed chief designer of the power transformer department of The British Electric Transformer Co., Ltd., an associate company of Crompton Parkinson, Ltd. Mr. Wakeling started at Hayes in 1941 as an engineering apprentice, and on the completion of his studies he joined the staff of the transformer engineering department as a senior assistant transformer design engineer, and was appointed a C.P. management trainee in 1959.



A. J. WAKELING

A. C. Morrison (Engineers), Ltd., have announced the appointments to the board of Mr. D. B. Waugh, F.C.A., as financial director, and Mr. D. L. Coller, B.Sc., A.M.I.E.E., sales director.

Mr. C. W. Page has been appointed to the newly-created post of sales manager of the industrial division of Castrol Industrial, Ltd. For the past three years, he has been a departmental sales manager within the industrial division.

Mr. Howard Williams, sub-agent for John Laing Construction, Ltd., on the erection of multi-storey blocks of flats for Bristol Corporation, has been awarded the London Association of Builders' Foremen and Clerks of Works Prize. The value of the annual award is 20 guineas.

Mr. P. E. Millington, M.C., A.M.I.H.V.E., has recently been appointed sales manager of the Aston Brass Co., a section of the Valor Co., Ltd. He joined Aston Brass from Fibreglass, Ltd., where he was assistant London sales manager. His appointment and that of Mr. W. H. Hayfield as new works manager point to a phase of reorganisation and reconstruction of the company.



P. E. MILLINGTON

Having been chairman of the Vitreous Enamel Development Council since its formation in 1956, Mr. S. W. Vickery, managing director of Ferro Enamels, Ltd., has resigned. His place will be taken by Mr. N. F. Parker, managing director of Stewart and Gray, Ltd. Mr. Vickery will continue to serve as a director of the V.E.D.C.

COMBINED WATER TOWER AND CHIMNEY ERECTED AT BELFAST

AN interesting form of structure has recently been completed at Belfast as part of the construction of the new Ulster Hospital, Dundonald.

The designers have combined the high chimney and the elevated external water tank into one structure, and, by adopting a new shape for the tank, have formed these two utility services into a single vertical feature.

The structure is 107ft. high and the tank, which has a capacity of 100,000 gallons, is constructed in a wineglass or tulip shape. The hollow supporting stem continues up through the centre of the tank and contains the chimney flue which discharges above the roof level.

The whole structure is of reinforced concrete with the flue lining in "Fossilsil" firebrick. The external surface of the tank has a smooth concrete finish, the radial and horizontal lines of the shaped formwork panels being visible. The stem is circular, 7ft. in diameter, with eight vertical fins or flutings. The plain, smooth surface of the large bowl, together with the thin fluted shaft, gives a pleasingly contrasting result, accentuated by the vertical shadows and planes of shade of the fins.

Circular Walkway

A circular walkway of aluminium rings the tank at its maximum diameter, supported on concrete beams cantilevered from the tank. This is an open grille floor made of radial bars and has a light handrail. Access to the walkway from the ground and from the walkway to the tank roof is by ladders, also of aluminium, made up as lattice box beams.

The tulip-shaped tank is 51ft. high with a maximum external diameter of 33ft. The wall varies in thickness from 13½in. to 6in. and is reinforced with ½in. circumferential bars on both faces and ½in. radial bars. The stem below the tank level is a 6in. thick annular section with 1in. vertical bars. The eight vertical fins are 8in. wide projecting 12in. and are incorporated in the structural design of the shaft.

The whole structure is founded on an octagonal base 30ft. wide and 6½ft. thick. The concrete mix design is 1 : 1½ : 3 and the water tank is designed in accordance with the Code of Practice for Water Retaining Structures. Tension in the concrete has been limited to 175lb. p.s.i. under the worst conditions. The modular ratio is 12.

The water tank is lined with asphalt on the inside to provide a waterproof membrane and smaller chambers are incorporated inside the tank at the top. The entry to the flue of the chimney is by a horizontal shaft at ground level.

Comments a correspondent: "Although the shape adopted presents some obvious



Combined water tower and chimney

constructional problems, the designers, faced with the disposition of two high and normally solely utilitarian structures, have used considerable ingenuity in the solution. The supporting on a single column of a large capacity tank with a big surface area at this height shows a bold use of reinforced concrete.

Consultants and Contractors

Architect for the scheme is Frederick Gibberd, C.B.E., A.M.T.P.I., F.R.I.B.A., the consulting engineers, Felix J. Samuely and Partners, and the contractors, Stewart and Partners, Ltd.

ROAD IMPROVEMENT WORKS

Payments To Displaced Persons

THE powers of local authorities in assessing discretionary payments under S.13 of the Act of 1959 in respect of displacement by road improvement works, have been investigated by the Highways and Transport Committee of the Association of Municipal Corporations.

This follows a letter from a member authority drawing attention to the requirement in Ministry of Transport circular 696/3 that the district valuer must for grant purposes certify that an ex gratia payment made by the local authority is reasonable.

The Council asked the Association to suggest to the Ministry that as the amount of these payments is decided by virtue of a discretion which is not exercisable solely by reference to the principles of valuation, the decision of the local authority should not have to be justified to the district valuer.

The Council do not consider that it is appropriate for the district valuer to have the last word as to whether grant is pay-

able on an amount which the authority have thought fit to award in the exercise of their statutory discretion; they would prefer the district valuer to have no part in the matter but, if the Ministry cannot accept that, they would like the possibility of some appeal against the district valuer's decision to be investigated.

Reporting on this, the Association of Municipal Corporations' Committee say:

"The Association are anxious to remove limitations on the discretion of local authorities imposed by Government departments, but we are not at present satisfied that in these particular circumstances there is a good case for asking the Ministry of Transport to depart from the practice which has been laid down.

"The reason why the Ministry require the certification of the district valuer that the payment made by a local authority under this section is accepted by the Ministry as part of the sum on which highway grant is payable; and since Government money is involved the Ministry feel that they ought to have a check on the local authorities' concept of what is reasonable."

In Parliament

CHANNEL TUNNEL

Further Discussions with French

THE Minister of Transport, Mr. Ernest Marples, announced in Parliament last week that the French Government had agreed to the suggestion made some time ago by H.M. Government that talks should take place about the construction of a Channel Tunnel.

Mr. Marples said that he had already discussed the project and possible alternative schemes informally with M. Buron, the French Minister of Public Works and Transport, and he hoped to have further discussions with him in Paris on November 20.

Great North Road

In a written answer, the Minister informed Mr. de Freitas that the total length of the Great North Road in Lincolnshire was just over 22 miles. Some 6½ miles had dual carriageways on October 1, 1961, and 15½ miles had not. A further 10½ miles of dual carriageway now under construction should be completed by October 1, 1962.

He added that on October 1 last, some 131 miles of the Great North Road between London and Newcastle had dual carriageways and 139 miles had not. It was expected that a further 30 miles of dual carriageway would be completed by October 1, 1962.

A.34 Improvement

Replying to Mr. Swinler the Minister expressed the hope that work on the first section of the A.34 road improvement scheme in Newcastle-under-Lyme would start early next summer.

Road Junction, Wembley

Mr. Marples told Mr. Russell that Middlesex County Council had submitted proposals for the construction of a roundabout at the junction of Harrow Road with Bridgewater Road and District Road, Wembley, in preference to traffic lights. He was now considering the payment of grant for this scheme.

Labour and Materials

The Minister of Housing and Local Government, Dr. Charles Hill, in a written answer told Mr. R. Edwards he was well aware that the building industry generally had been under heavy pressure recently and that this had led to difficulties, in particular a shortage of skilled labour. But he pointed out that the Government had already taken steps to reduce the excessive demands on the industry.

Improvement Grants

Dr. Hill, replying to Mr. F. Allaun, said that including local authority houses, 129,334 dwellings were approved for grant purpose in the 12 months ending September 30, 1961. Of this total, 62,121 were owner-occupied dwellings and 25,462 were occupied by tenants of private landlords.

London-Yorkshire Motorway

Sir B. Janner asked the Minister of Transport whether he had reached a decision on his plans for completing the Leicestershire portion of the London-Yorkshire motor road; and whether he would make a statement on the present position.

Replied Mr. Marples: We are continuing to make progress with the statutory procedures for the next sections of M.I. The side roads Order for the section in Northamptonshire has been made, and I expect to be in a position shortly to make the Order for Leicestershire. Land acquisition negotiations are in hand.

The Order for South Derbyshire has been published in draft, and I expect shortly to publish the connecting roads scheme for the southern half of the motorway and the side road Order for Nottinghamshire. Orders for the remaining sections of the motorway will be published as soon as possible.

Trade and Company News

NEW DEUTZ WHEELED TRACTORS AT SMITHFIELD SHOW

TWO new air-cooled Deutz wheeled tractors are to be displayed for the first time in this country at the Royal Smithfield Show on December 4-8. They were the D.15 and D.30 models, marketed in this country by British Deutz, Ltd., 1-6 Essex Street, London, W.C.2.

The D.15 is powered by a single cylinder 712 diesel and has a gearbox giving six forward and two reverse speeds. Standard features include independent front axle suspension, differential lock, mower drive,

hydraulic drive with three point linkage and gear or independently driven p.t.o. shaft.

The D.30 is a more powerful model, powered by a two-cylinder 712 diesel engine. The gearbox gives eight forward and two reverse speeds. Standard features on this model include: automatic weight transference to a slipping wheel, independent suspension on the telescopic front axle, differential lock, twin clutch, gear or independently driven p.t.o. shaft, and vertically adjustable and pivoting rear coupling.



Deutz D.30 with loader attachment

A.W./ALBARET UNIT FOR GUMA DAM

An A.W./Albaret C.11 Pullpactor is being shipped to Taylor Woodrow (Sierra Leone), Ltd., for use on the £2m. Guma dam project.

The machine is one of the range of pneumatic-tyred compaction rollers now made in this country by Armstrong Whitworth (Metal Industries), Ltd., Close Works, Gateshead 8, County Durham, England, under licence from the French Albaret concern. It is a towed unit with four wheels and a maximum weight with ballast of 100,000lb.

The order was placed through A. Long and Co., Ltd., 45 Parliament Street, London, S.W.1, agents for A.W./Albaret compactors in the south of England, and it is expected that the machine will go into service in the middle of November.

£700,000 ORDER FROM ISRAEL

Orders for vehicles worth £700,000 have been received from Israel by Leyland Motors, Ltd.

The contracts call for 124 four- and six-wheeled chassis for heavy service, powered by 150 h.p. diesel engines, and 111 medium load four-wheelers. The chassis, which include haulage, tipper and tractor models, will be distributed to various Israeli transport companies by the Consolidated Near East Co., Ltd., Tel Aviv.

Five months ago Leyland gained a £3m. contract from Israel for buses and spare parts.

COMPANY RESULTS

W. and C. French, Ltd.—Consolidated net loss for the year ended March 31, 1961, £282,557 (£52,416 profit). No ordinary dividend (3½ per cent.).

Stothert and Pitt, Ltd.—Group profit for the year ended June 30, 1961, £737,395 (£1,008,328). Net profit after tax, etc., £359,485 (£530,828). Dividend 20 per cent. (same).

The Cementation Co., Ltd.—Group net trading loss for the year ended March 31, 1961, £202,274 (£425,800 profit). No ordinary dividend (same).

JOHN DEERE-LANZ DEALERS APPOINTED

J. D. Tractors, Ltd., sole concessionaires in England and Wales for John Deere-Lanz equipment, recently announced the appointment of Bristol Plant Hire, Ltd., as sales and service dealers for an area covering Hampshire, West Sussex and Eastern Dorset. The photograph shows (left) Mr. H. Lyons, managing director of Bristol



Plant Hire, signing the territorial agreement with (right) Mr. P. E. Fleming, director of J. D. Tractors.

Bristol Plant Hire will be operating from a depot at Fareham, near Portsmouth, which is managed by Mr. T. Haysom, assisted by Mr. B. A. Hill who will be covering the area as John Deere-Lanz sales representative.

Lord Rootes, chairman of the Rootes Group, announced recently that the Group had purchased 100 acres of land in Venezuela for the construction of a £1m. car factory.

NEW ALBION CHIEFTAIN MODEL

THE Leyland Motor Group are to show a new addition to their Albion Chieftain range of haulage and tipping vehicles at the Scottish Motor Show on November 10. It is the Chieftain CH.3ATR, which has a fifth wheel coupling and semi-trailer and operates at a gross train weight of 358cwt.

The power unit is the 5.5 litre four-cylinder diesel, which is unit mounted with an Albion five-speed constant mesh gearbox. Helical gears are used for 3rd, 4th and 5th speeds. A 6th speed, 0.76 : 1 ratio overdrive, is available as an optional extra.

A propeller shaft of the open tubular type with needle roller bearing universal joints transmits power to the rear axle.

Vacuum-assisted brakes of the "two-leading-shoe" internal expanding type are hydraulically operated on all wheels. A large capacity vacuum tank and a reaction valve are additional standard equipment for trailer brake operation. The semi-trailer brakes can be operated independently by a small lever mounted on the steering column. This lever is connected to the reaction valve, giving the driver the "feel" of his brakes when operating the lever. The total braking area of the tractor footbrake is 494 sq. in. and that of the handbrake 305 sq. in.

Marles cam-and-double roller steering is fitted. Frame side members are of pressed steel channel. Direct acting shock absorbers at the front axle and rear helper springs are standard equipment.

TRANSLUCENT LIGHTWEIGHT SHEETING

B.I.P. Reinforced Products, Ltd., Sutton Coldfield, War., are now marketing a polyester/glass-fibre/nylon sheeting which weighs only 6oz. per sq. ft. and is shatter-proof. It is translucent and is available in a range of tints and colours either as a flat decorative panel or corrugated to suit most roofing profiles. It is both chemically and fire-resistant.

TRADE NEWS IN BRIEF

Wallace and Tiernan, Ltd., Power Road, London, W.4, have produced a brochure, Publication No. S/109, which gives information on a selected number of chemical control units.

A booklet, entitled *More Facts About the Jel Group of Companies*, has been produced by **J. E. Lesser and Sons (Holdings), Ltd.**, Green Lane, Hounslow, Middx., describing the diverse activities of members of the Group.

Wolsey Electronics, Ltd., Cray Avenue, St. Mary Cray, Orpington, Kent, have been appointed distributors of Grundig closed-circuit television in the British Isles.

"Quality in Weatherproofing" is the title of a new colour-film produced by **The Ruberoid Co., Ltd.**, 1-19 New Oxford Street, London, W.C.1, to assist architects and engineers in the selection of Ruberoid specifications.

G. B. Corner and Son, announce that their sole address is now Industrial Estate, York Road, Wetherby, Yorks. (tel: Wetherby 2942 and 2285).

The increasing industrial use of polyester/glass as a material of construction is illustrated in a new 24-page booklet entitled "The Cellobond Polyester Story," published by **The British Resin Products, Ltd.**, Devonshire House, Piccadilly, London, W.1.

"Asphalt Flooring" is the first of a new series of technical booklets published by **Permanite, Ltd.**, 455 Old Ford Road, London, E.3.

Following the continuation of *Trade and Company News* on page 100, other articles include *Talking of Safety*, by "Dragee" (p. 102); *Completion of Main Block* at Grey Residential College, Durham (p. 103); *Part of Sea Bed Reclaimed for Store Extension* (p. 104); *Factory Building Features Series of Precast R.C. Frames* (p. 105); *Pollution of the Tidal Thames—Important Improvements in Progress* (p. 106); *International Construction* (p. 107); *For the Diary* (p. 108).

Trade and Company News**EXCAVATOR FOR SMALLER CONTRACTOR****J.C.B.3 Now in Production**

A NEW hydraulic excavator, designed to appeal mainly to smaller contractors, was introduced to the technical Press last week by J. C. Bamford (Excavators), Ltd., Rocester, Staffs. Named the J.C.B.3, it is smaller, lighter and more manoeuvrable than the J.C.B.4, but is powered by the same Fordson Super Major Diesel engine.

While incorporating many of the features of the model 4, it has two entirely new ones—the provision of hydraulic stabilisers giving an angle of adjustment of 10 deg. to the horizontal to facilitate alignment on uneven ground, and a kingpost which can be offset and locked in any position on a 5ft. 8in. rack across the back of the machine. That this latter feature is of particular value for offset trenching, ditch clearing and operations of this nature was decisively shown at the demonstration when one of the first two machines off the production lines dug a trench 3ft. deep against a wall.

Other features of the J.C.B.3 include an integral frame and a low centre of gravity, two-lever control of all digging operations and a single-lever control of loading operations, a tearout force of 11,600lb., an optimum cycle time of under 10 seconds, 23in. ground clearance, ram standardisation and maximum safety and operator comfort.

Standardised Rams

The digging rams have been standardised at 3½in. bore, 29in. stroke and 2in. diameter shafts, and only one set of seals needs to be held for field servicing. The stabiliser rams are 2½in. bore with 1½in. diameter shafts. All rams are micro-finished and the pistons are cylindrically ground and surface chromed.

Two Hamworthy valves operate the digging and loading hydraulic system. One valve controls the digging operations by two multi-position levers, two further levers on this block controlling the raising or lowering of the stabilisers. Radio frequency induction hardened pins and bushes are used for all pivots and ram fixings, and filtration of the oil in the 30-gallon system is carried out by a filter of 4,800 sq. in. effective area.

Integral Construction

As previously stated, the frame is of integral construction, there being no A-

frame in this machine. The kingpost is carried on a carriage casting through which are bolted two sets of shafts encased by rollers, the end of each shaft terminating in a flange. These rollers ride on lateral sections or guides which are a feature of the rear end of the main frame. The travel of the kingpost along the guides is achieved by extending the dipper arm into a digging position on one side of the machine and retracting it with the bucket held against the ground, thus drawing the kingpost along the guides of the main frame. The length of traverse along the guides is 5ft. 8in. and with the kingpost fully offset the machine can excavate a trench at the side of a wall to a depth of 11ft., with a standard dipper arm, or to 13ft. with a long arm.

In the travelling position, the dipper arm is retracted against the guides and this feature, combined with the integral frame construction, gives a low centre of gravity which results in stable travel and an absence of swing when moving over rough ground.

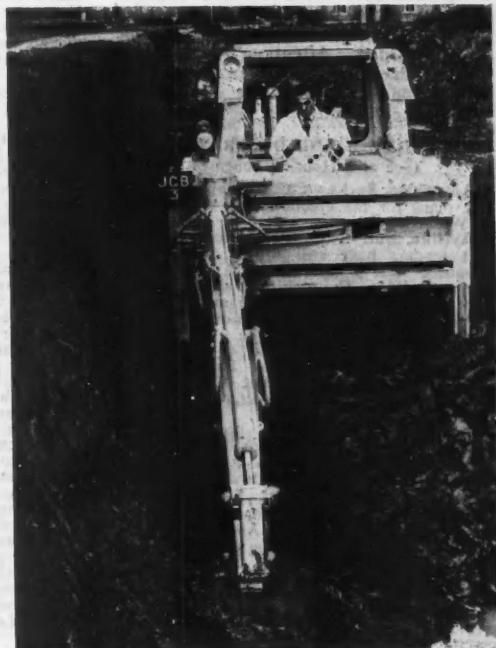
The stabilisers, which are extended when the machine is in the digging position to raise the wheels clear of the ground, consist of two box sections, the inner section being fitted with aluminium wearing strips. A double-acting hydraulic piston is connected to the end of each section. The lower section is fitted with a pin jointed foot-piece. The introduction of these units not only gives the machine improved stability whilst occupying a smaller lateral space than the J.C.B.4, but also enables a more rapid change of operating position to be made.

The operator's seat is carried on a pivoted, cantilevered arm such that the same seat is used for road travel and both digging and loading operations. It is positioned inside the cab and not astride the kingpost, this being a feature of particular importance when digging alongside walls, etc. The cab windows give full

vision in all directions and a hinged rear section of the cab can be lowered in inclement weather for further protection. The front axle fitted by J.C.B. has been specifically designed to withstand heavy shock loading.

Standard Items

Tyres are 7.50 x 16, 10-ply at the front, and 13 x 28, 6-ply at the rear, fitted as standard. Other standard items are full working lights and trafficators and an exhaust deflector cap which automatically closes when the engine is stopped, and deflects exhaust gases away from the cab and loader arms when the machine is operating. Power steering is a standard



J.C.B.3 digging 33in. trench close to hedge

item, as is the fitting of a 13in. sintered bronze clutch plate and a 2in. diameter grease stuffer to give efficient lubrication to the large clutch bearing. The fuel tank, which is integral with the main frame, is of 14½ gallons capacity.

Improved cooling is achieved by fitting a petrol engine type radiator which has 10 cooling fins to the inch, this unit being fitted in conjunction with a six-bladed, pusher-type fan. A baffle is fitted round the radiator to prevent the hot air ejected from returning to the engine compartment.

Equipment

The J.C.B.3 may be used as a face shovel in addition to the normal backacting role when trenching, all sizes of bucket being suitable for dual purpose operation. Bucket sizes are 15in.-18in. with side cutters, 21/24in., 27/30in., and 33/36in. In addition, a clay bucket with an 8-12in. taper is available, together with a 60in. ditch cleaning blade and a 36in. square hole digging bucket. Front end loader equipment consists of a ½ cu. yd. 46in. wide bucket, a 3/4 cu. yd. standard bucket 76in. wide, a bulldozer blade to fit the standard bucket, a scarifier and a ripper.

In operation, the maximum digging depth with long arm is 13ft., the standard reach being 15ft. 7in. The slewing and digging arc is 200 deg. and the loading height is 9ft. 4in. when operating as a backacter and 10ft. 9in. when operating as a face shovel. Cycle time when trenching at a depth of 5ft. and casting to one side is of the order of 10 seconds.

The maximum dump height of the front end loader is 9ft. 4in., the maximum lifting capacity being 4,600lb. Road speed is 1st gear 2 m.p.h., 6th gear 13 m.p.h.

The first J.C.B.3s are now coming off the production lines, the quoted price being £2,500 per machine complete.



J.C.B.3 with loader arms in raised position

Current Constructional Activities

PROJECTS • CONTRACTS • AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

BUILDING AND DECORATING

(See also Housing Schemes)

Amersham, Bucks.—C.C. have approved outline plans for the erection of a crematorium at Washcock Wood.

Aycliffe, Dur.—No contracts have been let, and tenders have still to be obtained for proposed factory additions at Aycliffe for C. Cripps and Son. The architects are Cordingley and McIntyre, Owengate, Durham City.

Ayr.—B.C. have granted planning approval, subject to conditions, for the erection of a hotel, offices, 30 shops and a supermarket between Alloway Street and Dalblair Road, for Murrayfield Development Co., Cornhill House, 144 West George Street, Glasgow, C.2. Estimated cost £600,000.

Basingstoke, Hants.—B.C. have approved, subject to conditions, plans for the erection of 20 maisonettes and garages at Norn House, Reading Road, for H. N. Edwards and Partners, Ltd., 21 Brook Street, Basingstoke.

Beddgelert, Caerns.—Leicestershire C.C. recommended to purchase Aberglaslyn Hall, near Beddgelert for conversion into an outdoor pursuits centre.

Bognor Regis, Sussex.—Ronald Lyon (Estates) Co., Ltd., Auckland House, New Zealand Avenue, Walton-on-Thames, Surrey, are awaiting planning permission for the erection of a further three factories at their industrial estate at South Bersted.

Bradford, Yorks.—City Council recommended to approve the erection of additional temporary storage accommodation at St. James's wholesale fruit and vegetable market. Estimated cost £2,500.

Brentford and Chiswick, Middx.—C.C. have no objection to B.C.'s proposal to re-build the South Lodge at Chiswick House grounds.

Bristol.—The Muller Homes for Children, Muller House, 7 Cotham Park, Bristol, 6, propose the erection of a new hostel at 28 Ravenswood Road, Redland.

City Council recommended to approve scheme for modernisation and improvement of the old City treasury in Broad Street. Estimated cost £45,000.

Carlisle, Cumb.—A. E. Robb and Partners, 36 Jesmond Road, Newcastle upon Tyne appointed consulting engineers by Newcastle Regional Hospital Board, for proposed staff hostel at Garlands Hospital. The architect is N. Edgar, 72 Warwick Road, Carlisle.

Cheadle, Staffs.—R.D.C. recommended to purchase land at Brookhouses, for industrial development.

Chester-le-Street, Dur.—Freeman, Son and Curry, 11 Victoria Road, Darlington, have submitted proposals to the planning authorities for a residential hotel at Blind Lane.

Broughs, Ltd.—Oxford Street, Newcastle upon Tyne are to erect shops, coffee bar and warehouse at Front Street. The architects are A. K. Tasker and Partners, 25 New Bridge Street, Newcastle upon Tyne.

Coulsdon, Surrey.—South West Metropolitan Regional Hospital Board recommended to appoint E. R. Babbs and Sons, 187 Piccadilly, London, W.1, as quantity surveyors for the erection of a female occupational therapy unit at Cane Hill Hospital.

Cumberland.—C.C. planning the erection of old people's houses in the Alston area.

Darlington, Dur.—H. B. Richardson, 3 Skinnergate, is the architect for four-storey light industrial and storage building, and two-storey building, at Prebend Row and Priorygate, for A. W. Snaith and Son, Ltd.

Territorial and Auxiliary Forces Association, Old Elvet, Durham. are to erect new training centre at Neasham Road. The architects are Fennell and Baddiley, Bridge End Chambers, Chester-le-Street.

Development Committee have approved the erection of a 27-bedroom police hostel in the grounds of Harewood House.

Daventry, Northants.—B.C. recommended to prepare scheme for the provision of about 21 garages in the Borough.

Deptford.—L.C.C. planning approval is being sought for the erection of shops and offices in a 16-storey block at the Century Cinema site, New Cross Road. H. Owen Luder, 79 Regency Street, London, S.W.1, is the architect for the scheme.

Dewsbury, Yorks.—Bartlett and Gray, 14-16 Bridgford Road, West Bridgford, Nottingham, are the architects for erection of supermarket at 25-27 Westgate, for Meadow Dairy Co., Ltd.

Durham.—Marshall Terrace Properties, Ltd., Claypath, Durham City, are seeking permission to convert the Globe Cinema, North Road, into shops and offices.

Eastry, Kent.—Unity Structures, Ltd., 6 Cromer Street, London, W.C.1, are to submit a tender to R.D.C. for the erection of 12 one-bedroom bungalows, four three-bedroom houses and an estate road at Ash.

Edinburgh.—Stanley Poole and Associates, 60 Castle Street, are the architects for erection of an 11-storey office block at Lauriston Street, for Scottish Oils and Shell-Mex, Ltd. Scheme still at an early stage.

Epsom, Surrey.—South West Metropolitan Regional Hospital Board recommended to approve the appointment of Locke and Beale, 303 Balham High Road, London, S.W.7, as consulting engineers for the erection of sanitary annexes and conversion work at West Park Hospital.

Evesham, Warks.—Co.E.C. have approved the purchase of site at Ashton-under-Hill for the erection of the proposed Evesham rural county secondary school.

Glasgow.—Dean of Guild Court have approved plans for erection of a ten-storey block at the junction of Jamaica Street and Clyde Street for the Great Universal Stores, Ltd., Universal House, Tottenham Court Road, London, W.1. Estimated cost £450,000.

Dean of Guild Court have approved plans for the erection of a new men's hall of residence on the Garscube estate for Glasgow University. Grenfell Baines and Hargreaves, architects, 12 Guildhall Street, Preston, Lancs. Estimated cost £225,000.

B.C. recommended to approve the erection of a nine-storey office block near Charing Cross, with two penthouse flats, a basement car park and a petrol filling station, for Parway Land Investments, London. Royce, Stephenson and Tasker, 3 Field Court, Grays Inn, London, W.C.1, are the architects for the scheme.

Gosforth, Northumb.—Funds are being raised for the purchase of Oakfield House, Gosforth, for conversion into an independent girls' school. The cost of converting the premises into a fully-equipped school with a science block will be about £103,000, but it is not intended to carry out the whole project in one stage. The architects are Mauchlen, Weightman and Elphick, 12 Saville Row, Newcastle upon Tyne.

Great Yarmouth, Norfolk.—B.C. recommended to approve the erection of two more blocks of toilets and showers at South Denes caravan site.

Greenwich.—B.C. recommended to approve in principle, scheme for repairs to the roof of the administrative block at the Town Hall. Estimated cost £3,000.

Harlow, Essex.—C.C. have approved provision of a civil defence control centre in the basement of the next stage of the new Town Hall, for U.D.C. Estimated cost £12,000.

Harrow, Middx.—C.C. recommended to approve the erection of an old people's home at Vernon Drive. Estimated cost £76,500.

Harrow, Middx.—B.C. have approved the renewal of baths for 57 houses on the Honeybun, Wealdstone, Berridge, and Kenton Lane estates. Estimated cost £1,285.

Hebburn, Dur.—A canteen is to be built at the engineering works of Baker Perkins, Ltd. The architects are Williamson and Partners, 7 St. Mary's Place, Newcastle upon Tyne.

Hebburn Trades and Labour Club are to purchase a site in Victoria Road East for new club premises.

Heywood, Lancs.—Tenders are to be invited for the erection of the Old People's Day and Luncheon Club on the corner of Hind Hill and Fox Street, for the Old People's Welfare Committee. Charles B. Pearson, Son and Partners, architects, 24 Loxford Street, Manchester, 1. Estimated cost £5,000.

Hove, Sussex.—South East Metropolitan Regional Hospital Board recommended to approve the appointment of Guy Felce, 60 West Street, Brighton, 1, as architect for the provision of a day centre at Lady Chichester Hospital.

Hythe, Kent.—B.C. have approved in principle, scheme for the erection of a sun lounge, toilets, dance hall and trading kiosks with flats over at the old pavilion site, Marine Parade.

Iseleworth, Middx.—C.C. recommended to include in the 1962-63 programme scheme for the erection of a special care unit at the Isleworth Junior Training School, Bridge Road. Estimated cost £12,710.

Kidderminster, Warks.—Co.E.C. have approved the inclusion of the second part of Shenstone Training College in the 1961-62 major building programme. Estimated cost £106,000; revised plans for the proposed new special day school, £54,250.

Kirkcaldy, Fife.—Alison and Hutchinson and Partners, 4 Rothesay Terrace, Edinburgh, 3, are preparing sketch plans for construction of swimming baths and hotel alongside in Charlotte Street. Ian Hunter and Partners, electrical and mechanical consultants, 46 Palmerston Place, Edinburgh, 12; James Gentles and Son, quantity surveyors, 37 Drumsheugh Gardens, Edinburgh, 3, and Leonard and Grant, 171 Victoria Street, London, S.W.1, are the structural consultants for the swimming baths.

Lancaster, Dur.—A new wing it to be built at Ushaw College to plans by D. Brown, 10 Lambton Road, Jesmond, Newcastle upon Tyne.

Littlehampton, Sussex.—U.D.C. have approved scheme for the erection of a clubhouse for The Arun Yacht Club. Samuels and Ross, 124 The Street, Rustington, are the architects and Andrew Roberts and Partners, 17 Cromwell Place, London, S.W.7, are the quantity surveyors for the scheme.

Loughborough, Leics.—B.C. have approved scheme for the construction of a new civic centre. Estimated cost £300,000.

Lowestoft, Suffolk.—Outline application has been submitted to B.C. for the construction of an hotel near the Wherry Hotel at Oulton Broad with a water frontage to Lake Lothing, architect for the scheme is R. B. Corless, 12 Gordon Road, Lowestoft.

Lowestoft, Suffolk.—Church of Jesus Christ of Latter-Day Saints, 6 Tattenham Crescent, Epsom Downs, Surrey, propose the erection of a Mormon chapel at corner of Yarmouth Road and Holdingsworth Road, at Gunton housing estate. Estimated cost £65,000.

Maidenhead, Berks.—Hazell, Watson and Viney, Ltd., Tring Road, Aylesbury, Bucks., propose the erection of printing works and warehouse. Estimated cost £140,000.

March, 1. of E.—U.D.C. have approved plans for the erection of new divisional police headquarters on the Redbridge Site, off Broommoor Road, for C.C.

Middlesbrough, Yorks.—B.C. propose old people's hostel at Pallister Park. Estimated cost £64,000.

Midhurst, Sussex.—R.D.C. to apply for sanction to borrow £4,600 for site works and the erection of garages at The Harrows, Tillington.

Morpeth, Northumb.—During 1962, Newcastle Regional Hospital Board, are to start work on a £42,000 teaching unit for the nursing staff at Stannington Hospital. Estimated cost £42,000.

Newbury, Berks.—Patrick Sweetnam, of Sutton, Griffin and Sweetnam, 87 Northbrook Street, Newbury, is the architect for the erection of a youth centre at the Waterside Chapel site, for C.C.

B.C. recommended to invite tenders from selected contractors for the improvement of the swimming pool.

Newcastle upon Tyne.—Housing Committee have approved, in principle, a £3,750,000 development in the Scotswood Road area of Newcastle. The project includes modern shopping centre with 30 shops, two multiple stores, health centre and branch library; a 15-storey block of 180 small flats above the shopping centre; two further 15-storey blocks of flats; four blocks of four-storey maison-

nettes; two-storey houses built in groups of 30; and a car park under the shopping centre for 100 cars.

Revised plans have been approved for garage and workshop at Benton Road, for Minories Garage, Ltd. The architects are Waring and Netts, 2 Lansdowne Terrace East, Gosforth.

Northampton. — Northamptonshire (Town and County) Association for the Blind propose the reconstruction of their workshops at Gray Street to provide additional accommodation. Estimated cost £34,000.

Nuneaton, War. — Co. E.C. propose the erection of a youth centre at Camp Hill estate.

Ossett, Yorks. — B.C. recommended to approve plan and invite tenders for the erection of pavilion and conveniences in Green Park.

Oswestry, Salop. — B.C. recommended to approve scheme for the construction of a new Smithfield market at Rod Meadow site. Estimated cost £325,000.

Paddington. — L.C.C. planning approval is being sought for the erection of a 12-storey block of flats and shops, filling station, garages and ancillary offices at 8-28 Queensway, for The City Parochial Foundation, 3 Temple Gardens, London, E.C.4.

Peterborough. — Joint Education Board recommended to authorise the preparation of working drawing and tender documents for the proposed second instalment of the Gunthorpe County Primary School. Architects for the scheme are Ruddle and Wilkinson, Long Causeway Chambers, Peterborough.

MacFisheries, Ltd. — Ocean House, Little Trinity Lane, London, E.C.4., propose the erection of a supermarket during 1962.

Portslade-by-Sea, Sussex. — East Sussex E.C. propose the erection of a branch library at Old Shoreham Road.

Potters Bar, Middx. — C.C. recommended to approve the erection of an old peoples' home in the grounds of Stapleton House. Estimated cost £105,940.

Pyrford, Surrey. — South West Metropolitan Regional Hospital Board appointed P. A. Lister, 79 High Street, Walton-on-Thames, as consulting architects, and John Leaning and Sons, 28 John Street, London, W.C.1, as quantity surveyors, for improvements to V. G. ward at Rowley Bristow Hospital.

Redhill, Surrey. — South West Metropolitan Regional Hospital Board recommended to approve the appointment of Cyril Kenney and Partners, 36 Gloucester Place, London, W.1, as quantity surveyors for the erection of a staff social centre at Royal Earlswood Hospital.

Richmond, Surrey. — B.C. recommended to approve for inclusion in the 1962-63 estimates, scheme for the erection of an old people's centre in the grounds of Penlee, Sheen Road. Estimated cost £10,000.

Rugby, War. — Divisional Educational Executive have purchased site at Anderson Avenue for the proposed new Rokeby High School.

Rushden, Northants. — U.D.C. to apply for sanction to borrow £1,800 for improvements at Newton Road depot.

St. Ives, Hunts. — B.C. recommended to proceed with scheme for improvements to 22 houses at Ramsey Road.

St. Marylebone. — L.C.C. planning approval is being sought for the erection of shops with flats over, at 4-34 Park Road, Guy Morgan and Partners, 20 Grosvenor Place, London, S.W.1, are the architects for the scheme.

Scarborough, Yorks. — B.C. recommended to approve sketch plans, etc., for erection of public conveniences in St. Thomas Street, estimated cost £4,482; plans for accommodation for storage of ice and installation of a crusher at fish shed, at West Pier, £2,721.

B.C. to sell land at Sandybed to North Riding C.C. for a proposed R.C. school; John Smith's Tadcaster Brewery Co., Ltd., Tadcaster, are to carry out alterations and additions to their Pier Hotel, Foresore Road; A. W. Sinclair and Sons, Ltd., 80 Commercial Street, are to erect joiners' and builders' workshops, warehouse and office, at the rear of 2-10 Commercial Street.

Scunthorpe, Lincs. — B.C. recommended to approve plans for the erection of workshops and offices, at Redbourn Works, for Richard Thomas and Baldwins, Ltd., 47 Park Street, London, W.1.

Skipton, Yorks. — R.D.C. have approved plans for swimming bath, gymnasium and ancillary buildings at Malsis School, Cross Hills.

Southgate, Middx. — C.C. recommended to approve the adaptation and extension of Vicar's Moor at Vicar's Moor Lane into a mental health recuperative hostel. Estimated cost £31,000.

Southwark. — L.C.C. approved plans for the erection of a day college at The Cut. Estimated cost £432,430.

Spennymoor, Dur. — Tivoli Investments, Ltd., Chiswell Street, London, E.C.1, are seeking

permission to erect a supermarket and four shops at Spennymoor. The architects are Boyer and Partners, 88 Grays Inn Road, London, W.C.1.

Stanmore, Middx. — C.C. recommended to approve the adaptation and extension of Tanglewood at Common Road as a mental health recuperative hostel. Estimated cost £320,500.

Stretford, Lancs. — B.C. recommended to grant planning permission for erection of office block and works extension, Skerton Road, for British Arkady Co., Ltd., and for petrol service station, car showroom (ground floor), storage (first floor) and dwellings flat over 465/473 Stretford Road, for Schenck Motor Engineering Co., Ltd.

Sunderland, Dur. — E.C. considering sketch plans for the proposed Bishop Harland C. of E. school, on the Hylton Red House estate. The architects are Philip R. Middleton and Partners, 111 Albert Road, Middlesbrough.

Newcastle upon Tyne Hospital Board, are to erect two operating theatres at Ryhope General Hospital. Board's chief architect P. H. Knighton, R. W. Gregory and Partners, Pilgrim House, Pilgrim Street, Newcastle upon Tyne are the consulting engineers for the scheme.

Surrey. — Barnes and Richmond B.C.s to invite tenders for the construction of a transfer station on the site of the present destructor plant. Estimated cost £24,000.

Sutton and Cheam, Surrey. — B.C. recommended to negotiate a tender with Concrete Utilities, Ltd., Great Amwell, Ware, Herts., for the provision of sheds at the Borough Sports Ground and Rose Hill Recreation Ground.

Town Planning Committee have approved, subject to conditions, outline application for the demolition of Queen Victoria Public House, London Road, North Cheam, and erection on site of kiosk, nine ground floor shops with offices over on second and third floors, two-storey supermarket with cafeteria and storage facilities, two-storey public house with flat on first floor and parking facilities including roof car park, for the Heron Group of Companies, 21 Chiswell Street, London, E.C.1.

Taunton, Som. — H. Hubbard Ford, 24 Cornfield Road, Eastbourne, is the architect for proposed new departmental store on Town Hall site, for Poppings (Stores), Ltd.

Tottenham, Middx. — C.C. recommended to approve, subject to Ministry approval, the erection of a fire station at St. Loy's Road. Estimated cost, £79,275.

Tutbury, Staffs. — Ministry have approved planning application for residential development on land north-west of Hall Green Avenue, Stretton, for Thomas Lowe and Sons, Ltd., Curzon Street, Burton-on-Trent.

Tynemouth, Northumb. — The Eso Petroleum Co., Ltd., propose reconstructing the Mariners Service Station, Tynemouth Road; J. M. Angus, 3 Gallowgate, Newcastle upon Tyne, is architect for alterations and additions to the Central Social Club, Camden Street, North Shields; plans have been approved for a warehouse at Tanners Bank, for Tyne Brand Products, Ltd. The architects are Tasker and Partners, 25 New Bridge Street, Newcastle upon Tyne; William Stockdale, 73 Howard Street, North Shields, has prepared plans for Sunday School hall, at the People's Mission, George Street, North Shields.

Virginia Water, Surrey. — South West Metropolitan Regional Hospital Board recommended to appoint J. B. Marks and Partners, 106 High Street, Guildford, as quantity surveyors for the erection of a preliminary training school at Holloway Sanatorium.

Wandsworth. — L.C.C. approved a scheme for the erection of a science block and gymnasium and adaptations at Rosa Bassett Secondary School. Estimated cost £130,000.

Wandsworth. — L.C.C. approved a scheme for the erection of a shop, two maisonettes and two garages at the corner of Montfort Place and Princes Way, Ackroydon estate. Estimated cost £10,800.

Ware, Herts. — C.C. have approved detailed plans for extensions to the girls' grammar school. Estimated cost £239,249.

Watford, Herts. — Working drawings are being prepared for the erection of the new South-west Herts. College of Further Education at Water Lane, for B.C. Tenders hoped to be invited early in the new year.

Watford, Herts. — R.D.C. have approved, subject to conditions, outline planning application for the erection of a church in the grounds of Breakspears College, Abbots Langley, for the Salvatorian Fathers.

West Herts Sports Club propose the erection of a new pavilion at their Cassio Road ground. Estimated cost £11,500.

Wednesbury, Staffs. — Ash and Lacy, Ltd., 36 Meriden Street, Birmingham, 5, have obtained planning permission for the erection of a new warehouse at Moxley.

Wellingborough, Northants. — U.D.C. to prepare, for submission to Ministry for approval,

scheme to convert the cemetery chapel at Doddington Road into a crematorium.

U.D.C. have approved plans for the erection of a supermarket in Market Street, for Tesco Stores, Ltd., Tesco House, Delomere Road, Cheshunt, Waltham Cross, Herts.

West Bromwich, Staffs. — B.C. have approved plans for the erection of licensed premises at Vernon Street and Oldbury Road, for Mitchells and Butlers, Ltd., Cape Hill, Birmingham 40.

Westminster. — L.C.C. planning approval is being sought for the erection of offices at 1, 2 and 3 Grosvenor Place (Stone, Toms and Partners, architects, 11-15 Farm Street, London, W.1) and the construction of a multi-storey mechanical car park at 33-39 Savile Row and 3-9 Old Burlington Street (Howard V. Lobb and Partners, architects, 20 Gower Street, London, W.C.1).

Woolwich. — South East Metropolitan Regional Hospital Board recommended to approve a revised estimate of £245,700 for the erection of new out-patients' department at St. Nicholas Hospital.

Worcestershire. — Standing Joint Committee to invite tenders before next February for the erection of new divisional police headquarters, new Magistrates' Court and a new ambulance station at Malvern. Estimated cost £142,250.

M.E. have approved in principle proposals to build youth annexes at secondary schools at Stourbridge and Droitwich and also at schools yet to be chosen at Malvern and Bromsgrove for Co.E.C.

GAS AND WATER SUPPLY

Barnes, Surrey. — M.W.B. approved a scheme for the laying of about 640yd. of 12in. main from Upper Richmond Road to Mortlake High Street. Estimated cost £9,200.

Bradford, Yorks. — City Council recommended to approve the laying of water mains. Estimated cost £10,000.

Dungannon, Tyrone. — R.D.C. to apply for sanction to borrow £66,000 for additional water and sewerage schemes in the Coalisland area.

Kidderminster, Worcs. — R.D.C. to proceed with scheme for the provision of a water booster station at Rock. Estimated cost £2,383.

Tenbury, Staffs. — R.D.C. recommended to approve in principle scheme for enlarging and improving the town's water supply and would include the extension of mains to Old Wood, Berrington, and as far as St. Michaels. Estimated cost £46,000.

Tynemouth, Northumb. — Water Department are to erect a reservoir at Bedlington and provision for the capital expenditure involved will be made during 1962-64. Plans and estimates are to be prepared in readiness for inviting tenders.

HOUSING SCHEMES

Ayr. — Dean of Guild Court have approved the erection of 153 houses (30 six-apartment and 123 five-apartment) at Doonholm Road, Alloway, for Weir Housing Corporation, Ltd., Calder Street, Coatbridge.

Bedale, Yorks. — R.D.C. proposes old people's bungalows, common room, and warden's flat at Wycar. The Council's architect is K. V. Shaw, Oak House, Market Place, Bedale.

Bexhill-on-Sea, Sussex. — B.C. recommended to submit following programme for 1962 to Ministry for approval: Stage 4 of the replacement of temporary bungalows comprising 30 units of accommodation, erection of 12 aged persons' flats adjoining 11 De La Warr Road, provision of 11 dwellings for slum clearance and the acquisition and conversion of suitable properties into aged persons' flatlets.

Bishop's Stortford, Herts. — U.D.C. recommended to approve layout plan for the erection of 83 units of accommodation at the Plow Hatch Close site comprising six blocks of three-storey flats, three blocks of maisonettes and bed-sitters, seven pairs of semi-detached houses and a five-storey block of flats and maisonettes.

U.D.C. have received planning permission for the erection of eight old people's bungalows at Mill Street.

Blaydon, Dur. — Vickers, Ltd., Plummer Street, Newcastle upon Tyne propose 12 houses, and house and shop at Shildon Road.

Bristol. — City Council propose the erection of two 11-storey blocks of flats near Lawrence Hill Station and a nine-storey block at the disused quarry site at Clifton.

Burton-on-Trent, Staffs. — B.C. have approved, subject to conditions, plans for the erection of 90 houses and garages at Barton Street and Leicester Street, for Metropolitan Railway County Estates, Ltd., Kensal House, Harrow Road, London, W.10.

Dungannon, Tyrone. — R.D.C. to apply for sanction to borrow £265,000 for slum clearance and the erection of 158 houses at Coalisland.

Dunmow, Essex. — R.D.C. are to proceed with plans for the erection of 42 dwellings during 1962.

Easington, Dur. — Peterlee Development Corporation, are to erect 359 houses at Chapel Hill. No contracts let. The Corporation have prepared their own plans.

Eton, Bucks. — U.D.C. have received conditional planning permission for the erection of three blocks of four-storey flats over garages in Birches Street, Meadow Lane.

Greenock, Renfrews. — Dean of Guild Court have approved plans for flats and shops to be erected at Central Station Avenue. Plans provide for two four-storey blocks comprising 46 houses and seven shops. Estimated cost £150,000.

Guildford, Surrey. — R.D.C. have approved outline plans for the erection of 46 houses on land fronting South Lane, Ash, for Henry T. Hill and Sons, Ltd., Connaught Buildings, Brookwood.

Halifax, Yorks. — B.C. to invite West and Sons (Development), Ltd., Morley, and F. Shepherd and Son, Ltd., York, to submit detailed tenders amended for erection of houses at Brow Bottom and Seed Hill Terrace, Mixenden.

Hampstead. — L.C.C. planning approval is being sought for the erection of 52 flats and garages at 44-66 Adelaide Road. Louis de Soissons, of de Soissons, L. Peacock, Hodges and Robertson, 3 Park Square Mews, London, N.W.1, is the architect.

Hebburn, Dur. — William Leech, Ltd., St. James' Street, Newcastle upon Tyne are seeking permission to erect luxury flats on the Ponds Site.

Houghton-le-Spring, Dur. — William Leech, Ltd., St. James' Street, Newcastle upon Tyne are seeking permission to erect about 300 houses, shops and flats at Shirey Row.

Huntingdon. — R.D.C. to submit to Ministry schemes for the erection of 28 dwellings for slum clearance and two-storey block of old people's accommodation at Brampton during 1962.

Isle of Man. — Local Government Board is preparing scheme for the erection of about 30 dwellings for elderly people at Marashen Crescent, Port Erin.

Isle of Wight. — R.D.C. to seek Ministry approval for the construction of 70 dwellings during 1962.

Islington. — B.C. recommended to appoint E. C. P. Monson, 120 Moorgate, London, E.C.2, as architect, and Oswald E. Parratt and Partners, Adelaide House, London Bridge, London, E.C.4, as quantity surveyors for the erection of dwellings at the Unitarian Church premises, Highgate Hill.

Kingsclere and Whitchurch, Hants. — R.D.C. to proceed with the erection of 50 houses, etc., at the following sites during 1962: Kingsclere — six houses; Overton — two blocks of four houses and four three-bedroom houses; Teddington — 12 three-bedroom houses and four flats; Whitchurch — eight houses and four old people's bungalows; and Burghclere — four bungalows.

King's Lynn, Norfolk. — B.C. recommended to approve plans for stage 2 of development at Highgate estate comprising two blocks of flats and a block of seven terraced houses for re-housing families from Highgate No. 2 Clearance.

Lambeth. — L.C.C. approved a scheme for the erection of 47 dwellings in a four-storey maisonnette block, two two-storey terraces of houses, a four-storey block of flats, 48 garages and 15 tenants' stores at Upper Tulse Hill Extension site. Estimated cost £181,860.

Lichfield, Staffs. — City Council recommended to grant outline planning permission for the erection of three blocks of flats at Stowe Hill, for C. G. Chantrill and Partners, Ltd., Stowe, Lichfield.

Lytham St. Annes, Lancs. — B.C. recommended to approve plans for erection of 10 pairs of semi-detached bungalows with private garage to each at Singleton Avenue and Elswick Place for Matthews and Turner, Ltd., Bristol Avenue, Blackpool.

Midhurst, Sussex. — R.D.C. to apply for sanction to borrow £5,680 for the acquisition of land at Taylors Farm, West Lavington, for housing purposes.

Newcastle-under-Lyme, Staffs. — B.C. recommended to submit to Ministry for approval, housing programme for 1961 comprising the following:

Thistleberry estate, 170 dwellings (including 28 in old people's bungalow scheme); Charles Street, May Bank, 22; Robertson Drive, Cross Heath, 12; Church Street, Silverdale, 20; Oldcastle Avenue, Bradwell, 12; Moorthorpe Crescent, Bradwell, 12; High Street, Wolstanton, 12.

Northampton. — R.D.C. to submit to Ministry for approval, schemes for the erection of bungalows as follows: 12 at Hyde Road, Roade, five at two sites at Cogenhoe, nine on two sites at Great Houghton, six at Lodge Road, Little Houghton, two each at Rothersthorpe and Wootton and four at Chase Park

Road, Yardley Hastings. Total Estimated cost £64,000.

Oakham, Rutland. — R.D.C. hope to invite tenders before the end of the year for the erection of 12 flats.

Oban, Argyll. — Dean of Guild Court have approved B.C.'s new housing development at Corran Brae, providing for 162 houses and two shops.

Paisley, Renfrews. — Dean of Guild Court have approved plans for 26 three-apartment maisonnettes and a laundrette in Neilston Road, opposite Paisley Royal Alexandra Infirmary.

Richmond, Surrey. — B.C. recommended to submit to Ministry for approval, scheme for the erection of 84 dwellings during 1962 and 108 during 1963 as the first and final stages respectively of the redevelopment of the prefab estate at Ham Close, Ham.

Ripon, Yorks. — City Engineer to be requested to prepare a scheme to provide 47 units of accommodation at Oak Road and submit an amended layout and plans for approximately 12 bungalows at Bondgate.

Rochester, Kent. — Ministry have approved City Council's scheme for the acquisition and clearance of the Queen Street-Morden Street areas for housing purposes.

Rugby, War. — R.D.C. have approved scheme for the erection of houses (for sale) at Ryton-on-Dunsmore, Stretton-on-Dunsmore and Wolston.

St. Marylebone. — B.C. to invite tenders in due course for the revised development of the Freshwater Place site, comprising the erection of nine maisonnettes in a four-storey block fronting Homer Row. A. W. Kenyon, Tautu and Partners, 140 Park Lane, London, W.1, are the architects for the scheme. Estimated cost £32,000.

L.C.C. planning approval is being sought for the demolition of Clarence Terrace and erection on site of houses, flats and maisonnettes. Guy Morgan and Partners, 20 Grosvenor Place, London, S.W.1, are the architects for the scheme.

Salisbury, Wilts. — City Council recommended to approve the 1962-63 housing programme to include 66 for the replacement of the pre-fabs in Devizes Road; eight bungalows and 20 one-bedroomed flats for old people, together with warden's accommodation, at West Harnham; and seven three-bedroomed houses, 22 two-bedroomed and 24 three-bedroomed maisonnettes, and 24 old persons' flats, at the Friary.

Saxmundham, Suffolk. — U.D.C. to proceed with scheme for the erection of old people's dwellings at corner of Chapel Road and St. John's Road.

Scarborough, Yorks. — Borough Engineer has prepared a layout plan for 51 old people's dwellings and wardens houses with communal facilities on the Sandybed estate. Sites are also to be considered for the erection of further one-bedroomed flats.

Scunthorpe, Lincs. — B.C. recommended to approve plans for the erection of 100 flats in 25 two-storey blocks and 100 garages at Scotter Road and Burrougham Road, for Abele, Ltd., 4 the Quadrant, Coventry, War.

Solihull, War. — B.C. recommended to approve in principle plans for housing development on land at rear of Olton Hall public house.

Southwark. — L.C.C. approved plans by Collicutt and Hamp, 86 Prince Albert Road, London, N.W.8, for the development of a site at Mardyke Street by the provision of 50 flats in a 13-storey block, a four-storey block of 14 maisonnettes, 12 garages, 12 parking spaces, a play space and 33 tenants' stores. Estimated cost £231,400.

Stepney. — L.C.C. approved plans for the development of a site at Wager Street by the construction of 25 maisonnettes and a two-room flat in a four-storey block, eight garages, four parking spaces, a play space and 14 tenants' stores. Estimated cost £82,900.

L.C.C. approved plans by Lancashire and Lodge, 10 Woburn Square, London, W.C.1, for developing a site between Skidmore Street and Solebay Street, by the provision of 12 flats and 42 maisonnettes in a six-storey block, 28 tenants' stores, 17 garages and 12 parking spaces. Estimated cost £176,500.

Stirlingshire. — C.C. have approved, in principle, planning permission for the initial stage of a large building development providing for about 2,000 houses north of Glasgow, for Mactaggart and Mickel, Ltd., 107 West Regional Street, Glasgow, C.2. Work hoped to commence next year on the first stage extending to approximately 44 acres.

Sutton and Cheam, Surrey. — Ministry to hold a public inquiry on Feb. 13 into B.C.'s outline plans for the redevelopment of the Benhill Avenue area.

Thedwastre, Suffolk. — R.D.C. to re-invite tenders for the erection of a block of 6 old people's bungalows with common room at Walsham-le-Willows.

Tidworth, Hants. — War Department propose the erection of another 350 married quarters at North and South Tidworth in addition to the 600 already being built there.

Towcester, Northants. — R.D.C. have approved scheme for the erection of 36 houses to be occupied by employees of the Plessey Co., Ltd.

Twickenham, Middx. — C.C. have approved, subject to conditions and Ministry approval, plans for the erection of 40 houses and 40 garages on a prefabricated site opposite the Winning Post public-house, Chertsey Road, for B.C.

Tynemouth, Northumb. — J. T. Bell and Sons, Market Street Chambers, Newcastle upon Tyne, are to erect a further 104 houses on the Marden West estate.

Uppingham, Rutland. — R.D.C. to instruct Gregory Housing, Ltd., to prepare amended boundary of Johnson Road.

Wandsworth. — L.C.C. planning approval is being sought for the erection of 20 flats, 12 houses and 17 garages at 198 West Hill, for Norman Property Co. (London), Ltd., 1 Hay Hill, London, W.1.

PLAYING FIELDS, PARKS, ETC.

Bradford, Yorks. — City Architect to be instructed to prepare and submit a scheme for laying out approximately eight acres of land at Dick Lane as school playing fields.

Daventry, Northants. — B.C. are preparing scheme for landscaping site at the swimming pool; approve the provision of an adventure play area in New Street recreation ground.

RIVER AND FLOOD PREVENTION WORKS

Horncastle, Lincs. — Ministry have approved scheme for the strengthening of the banks of the Bain and Waring Rivers, for River Board. Estimated cost £75,000.

Leominster, Herefs. — Ministry have approved scheme for flood alleviation at Honeylake Brook, Ivington, for River Lugg Drainage Board. Estimated cost £3,965.

Newbury, Berks. — R.D.C. to proceed with scheme for the alleviation of flooding at Thatcham. Estimated cost £40,000.

Walsingham, Norfolk. — R.D.C. have prepared scheme for alleviating the surface water problem in Fakenham.

The areas dealt with will be Holt Road and Wells Road between the junction with Clay Pit Lane and the junction with Nelson Road.

ROADS, BRIDGES AND SITE WORKS

Aldridge, Staffs. — R.D.C. are to submit to M.T. for approval, plans for dual carriageway improvements along the whole three miles stretch of the Queslett Road from the Scott Arms to Chester Road.

Barnes, Surrey. — B.C. recommended to approve the construction of a footbridge over Beverley Brook between Rosslyn Road and Woodlands Road.

Bishop's Stortford, Herts. — U.D.C. recommended to approve the making up of Thorley Hill (part). Estimated cost £8,850.

Bradford-on-Avon, Wilts. — C.C. have granted planning permission for the construction of a footbridge across the river from Church Street to Westbury House, for U.D.C.

Bradford, Yorks. — City Council recommended to apply for sanction to borrow £16,736 for private street works at Hollingwood Mount, Holly Park Drive (part), Holly Park Grove, Wellbeck Drive (parts) and Sundown Avenue.

Camberwell. — B.C. recommended to approve plans for the improvement of Lordship Lane at the junction with Barry Road and Eynella Road. Estimated cost £2,900.

Eastbourne, Sussex. — B.C. recommended to prepare detailed plans for the widening of Church Street.

Great Yarmouth, Norfolk. — Highways Committee have approved schemes for the widening of Church Road, Gorleston, between Garnham Road and the new layby and bus stop near White Horse corner.

Istleworth, Middx. — C.C. recommended to approve, subject to Ministry approval, scheme for improvements at Spur Road between Great West Road and the railway bridge. Estimated cost £15,000.

Middlesbrough, Yorks. — B.C. recommended to spend £27,000 improving roads and sewers to serve the light industrial estate in the Lloyd Street area.

Peel, I. o. M. — B.C. are to carry out by Direct Labour schemes for the construction of a new road out of Peel, taking down of the Rocket House and the pulling down of the Douglas Street houses.

Port Glasgow, Renfrews. — Secretary of State for Scotland to make grant of £182,000 to the B.C. towards cost of improving Kilmacolm Road (A.761) and High Carnegie Road.

Ripon, Yorks.—City Engineer to be authorised to prepare a scheme for the laying out part of land as a cemetery and widening and improvement in Little Harries Lane.

Rushden, Northants.—U.D.C. to apply for sanction to borrow £12,400 for road and sewer works at Spinney Field.

Shrewsbury, Salop.—M.T. have asked B.C. to prepare a scheme for the widening of a section of the A.49 trunk road north of the town into a three-lane carriageway in connection with a new link road and bridge over the River Severn which will allow the heavy Merseyside to South Wales traffic to bypass the town centre. The section of the A.49 to be widened is just beyond the northern outlet of the new link road.

Tenders for the link road, which is estimated to cost £350,000, are expected to be invited before the end of the current financial year.

Skegness, Lincs.—U.D.C. to prepare plans for extending the Tower esplanade towards the sea.

Stretford, Lancs.—B.C. recommended to approve in principle road and sewer works in connection with Empress Court Tower Block. Estimated cost £2,850.

Trowbridge, Wilts.—Ministry have approved the construction of roads and footpaths, surface water drains and sewers, at Bradley Road industrial site.

Tynemouth, Northumb.—B.C. are to build a subway between Bridge Road North and Bridge Road South and provision will be made in next year's estimates.

Wellingborough, Northants.—U.D.C. have approved in principle scheme for the widening of the Irthingborough Road from the bridge over the railway to the Sidegate Lane junction.

Willesden, Middx.—B.C. recommended to submit to C.C. for inclusion in the 1962-63 programme following schemes: High Road, Willesden (Church Road to Dudden Hill Lane), resurfacing of carriageway, £6,850; High Road, Willesden (Dudden Hill Lane to Walm Lane), resurfacing of carriageway, £8,850; Acton Lane (North Acton Road to Morduant Road), resurfacing of carriageway with ancillary works to footpaths, £3,920; Dudden Hill Lane (High Road, Willesden to Denzil Road), re-shaping and resurfacing of carriageway and reconstruction of footpaths, £9,000; Willesden Lane (Coverdale Road to Sidmouth Road), reconstruction of carriageway together with works to footpaths, £38,400; Willesden Lane (Dyne Road to Coverdale Road), reconstruction to new line, £70,000; Palermo Road (junction with Bathurst Gardens), construction of new roundabout, £33,000; Harrow Road (junction with Craven Park Road), construction of roundabout, £26,000; Dudden Hill Lane (Southview Avenue to Clifford Way), widening and reconstruction of carriageway together with installation of bus layby, £27,000; Willesden Lane (Winchester Avenue to Prince of Wales public house), accommodation works for future widening, £5,600; Salisbury Road (Canterbury Road, Albert Road to Malvern Road), reconstruction of carriageway, £33,000; railway bridge, Chamberlayne Road (Harvest Road to Banister Road) reconstruction and widening, £23,000.

C.C. recommended to include, subject to Ministry approval, scheme for the additional resurfacing of A.404 Harrow Road (part) in the 1961-62 programme. Estimated cost £2,370.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bexhill-on-Sea, Sussex.—B.C. recommended to prepare for submission to Ministry for approval, detailed scheme for the improvement of the surface water drainage in the St. Peter's Crescent/London Road area to alleviate flooding.

Chesterton, Camb.—R.D.C. to prepare, for submission to Ministry for approval, detailed sewerage scheme for the villages of Harston, Hauxton and Haslingfield. Estimated cost £308,800.

Exeter.—City Council recommended to apply for sanction to borrow £12,590 for the construction of new foul water sewers in Tiverton Road, Blackboy Road and the Inner By-pass Road.

Farnworth, Lancs.—B.C. recommended to apply for sanction to borrow £136,000 for Stage 1 of sewerage scheme. J. D. and D. M. Watson, consulting engineers, 67 Tufton Street, London, S.W.1.

Isle of Man.—Local Government Board to apply for sanction to borrow £1,600 for drainage scheme to serve the Booilushay housing estate at Maughold.

Jarrow, Dur.—B.C. to spend £5,000 on the construction of a sewer to serve the Bede trading estate.

Uppingham, Rutland.—R.D.C. recommended to prepare detailed plans for proposed sewerage and sewage disposal scheme for the Parish of Ayston,

Shrewsbury, Salop.—B.C. recommended to approve revised scheme for the reconstruction of Monkmoor sewage disposal works. Estimated cost £605,975.

Upton-upon-Severn, Worcs.—R.D.C. to prepare sewerage schemes for Kinnerley and the upper portion of Severn Stoke, Hill Croome (Baughton), Earls Croome, Ripple and Uckinghall.

Wainford, Suffolk.—C.C. have approved sewerage and sewage disposal scheme for West Hall for R.D.C. Estimated cost £9,265.

Woodbridge, Suffolk.—C.C. have approved scheme for new relief sewers at Burkitt Road and Fen Meadow, to relieve flooding in the Town, for U.D.C. Estimated cost £13,900.

CONTRACTS

*Full details of the Contracts marked * will be found in our Advertisement Columns.*

BUILDING AND DECORATING

Aberdeen.—Conversion of six houses in the tenement property at 16 Wallfield Place, for City Council: Mason, drainage and slater; carpenter and joiner; plumber; lath and plaster; electrical; painter and glazier. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by November 10.

Aberdeen.—Strengthening in reinforced concrete of sand store walls at Mastrick Cleaning Depot, for City Council. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by November 16.

Aberdeenshire.—Extension and alterations to Stoneywood Primary School for the C.C. (1) Excavator, mason, brick, concrete and drainage work; (2) carpenter and joiner work; (3) steel window installation and rooflights; (4) asphalt work; (5) slater and roughcast work; (6) plaster and cement work; (7) plumber work; (8) heating and primary hot water installations; (9) electrical engineer work; (10) glazier and painter work; (11) terrazzo and tile work; (12) flooring. Documents from J. A. O. Allan, Ross and Allan, architects, 10 Bon-Accord Square, Aberdeen.

Bath, Som.—Supply and erection of a reinforced concrete portal framed building, including roofing, wall cladding, and ancillary works, to form part of the proposed Corporation plant and transport depot. Building size 120ft. by 75ft. by 17ft. high to eaves, at Upper Bristol Road, for City Council. Documents from the City and Waterworks Engineer, Guildhall, Bath. Deposit £2 2s. Tenders by November 20.

Bedewell, Mon.—Demolition of the existing ladies' and gent's toilets and the erection of a new public convenience at the Showfields, Blackwood, for U.D.C. Documents from Engineer and Surveyor, Municipal Offices, Abercarn, Glam. Tenders by Nov. 24.

Belfast.—Erection of Somerdale Boys' Secondary School, Somerdale Park, for City Council. Documents from the City Architect's Department, 40 Academy Street, Belfast, 1. Deposit £5, cheques payable to Belfast Corporation. Tenders by December 7.

Belfast.—Following for City Council: (a) Redecoration work at Skegmorell School of Commerce, Old Cavehill Road; (b) painting work at Transport Museum, Tamar Street; (c) recovering of roofs at Blythefield Primary School, Blythe Street; (d) complete plumbing installation at Somerdale Boys' Secondary School at Somerdale Park. Documents from City Architect's Department, 40 Academy Street, Belfast, 1. Tenders (a), (b) and (c) by November 16, and (d) November 23.

Berkhamsted, Herts.—Installation of wash-hand basins in 29 Council houses in the following Parishes, for R.D.C.: Aldbury, two; Little Gaddesden, five; Potten End, 12; Long Marston, four; Wigginton, one; Wilstone, five. Documents from the Surveyor, Boxwell House, 275 High Street, Berkhamsted. Tenders by November 13.

Bishop's Stortford, Herts.—Demolition and reconstruction of approximately 50 lin. yds. of brick retaining wall in Rye Street, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Bishop's Stortford. Deposit £1 1s. Tenders by Dec. 2.

Bradford, Yorks.—Single-storey garage building, approximately 217ft. by 160ft., at Shearbridge Road Depot, for City Council. Comprising the construction of the above building consisting of brick panel walls, insulated asbestos roof and electrically heated R.C. floor, etc. The foundations and steel framework of the building including certain ancillary works are already under construction and are not included in this contract. Documents from the City Engineer and Surveyor, Town Hall, Bradford, 1. Deposit £2 2s. Tenders by November 15.

Bridlington, Yorks.—Alterations and extensions at Lloyd Hospital, for the Leeds

Regional Hospital Board. Applications to the Architect to the Board, Park Parade Harrogate, by noon, November 7. Deposit £2 2s., cheques payable to the Board and crossed. Plans seen at the office of the Architect to the Board, or at the office of Mortimer Partners, architects, Ainderby Hall, Northallerton. Tenders by December 7.

Cardiff.—Alterations to the patent glazing in the roof of the transport depot at Sloper Road, for City Council. Documents from the City Architect's Department, Municipal Offices, Greyfriars Road, Cardiff. Deposit £2 2s., cheques payable to the Cardiff Corporation and crossed "Not Negotiable and Co." Tenders by Nov. 9.

Castlereagh, Down.—External painting of following for R.D.C.: (a) Sixty-two houses at Downshire Park East; (b) 23 lock-up garages at Downshire Parade. Documents from the Council Offices, 368 Cregagh Road, Belfast, 6. Deposit £3. Tenders by November 10.

Cheshire.—Erection of Macclesfield College of Further Education (approximate value £110,000), for C.C. Applications to Edgar Taberner, county architect, County Hall, Chester, by Nov. 8. Deposit £2 2s., payable to Council and crossed "Westminster Bank, Ltd." Plans seen at the office of W. S. Hattrell and Partners, architects, 15 Piccadilly, Manchester, 1. Tenders by Dec. 12.

Cheshire.—Erection of Stalybridge Clinic and Divisional Health Offices (approximate value £60,000), for C.C. Applications to E. Taberner, county architect, County Hall, Chester, by November 15. Deposit £2 2s., payable to the Council and crossed "Westminster Bank, Ltd." Drawings seen at the office of the County Architect or the District Architect's Office, Remenham, Alderley Road, Wilmslow. Tenders by December 13.

Chingford, Essex.—Single-storey extension to Larkswood Social Centre, for B.C. Documents from the Borough Engineer, Town Hall, Chingford, E.4. Deposit £2 2s. Tenders by November 20.

Colchester, Essex.—Erection of 38 lock-up garages on five sites at Shrub End estate for B.C. Documents from Vinton Hall, borough architect, 84 West Stockwell Street, Colchester. Deposit £2 2s. Tenders by Nov. 13.

Cornwall.—Erection of a branch library at Torpoint and at Saltash, for C.C. Applications to the County Architect, County Hall, Truro, by Nov. 8. Deposit £3 3s. Tenders by Dec. 29.

Down.—Alteration work at the Committee's Divisional Offices, 414 Ormeau Road, Belfast, 7, for C.C. Documents from the County Planning Officer, English Street, Downpatrick. Tenders by Nov. 10.

Down.—Erection of a new child health clinic and library at Castlewellan, for C.C. Documents from the County Planning Officer, English Street, Downpatrick, or from G. McNeill, 29 Wellington Place, Belfast, 1. Deposit £3. Tenders by 4 p.m., November 13, extension of date.

Egham, Surrey.—Improvements and repairs including the provision of a bathroom, alterations to the kitchen, the installation of a hot water system, additional drainage and cesspools and general repairs and decorations to 19 council houses in Sandhills Lane and four in Rosemary Lane, Thorpe, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, 155 High Street, Egham, Tenders by December 1.

Essex.—Erection of Hockley Health Services Clinic for C.C. The work will be in traditional construction. Estimated cost £9,500. Applications to H. Conolly, county architect, County Hall, Chelmsford, by Nov. 4.

Essex.—Erection of Weeley Civil Defence Centre, for C.C. The work will be in traditional construction, estimated cost £6,000. Applications to H. Conolly, County architect, County Hall, Chelmsford, by November 4.

Goole, Yorks.—Alteration and improvement of eight houses at Dobella Square, Rawcliffe, for R.D.C. Documents from the Surveyor, Goole Rural District Council, 149 Boothferry Road, Goole. Deposit £1 1s. Tenders by Nov. 30.

Gwyrfal, Caerns.—Following for R.D.C.: (1) Construction of new boundary walls and erection of intermediate and back fences, etc., at—(a) Maes Hyfrd, Carmel, (b) Bro Rhiwien, Rhiwlas. (c) Dol Erdi, Waunfawr; (2) the erection of two blocks of six garages and ancillary siteworks at Llwyn Beuno, Bontnewydd. Documents from J. Isgoed-Williams, county architect, Pant yr Afon, Penmaenmawr. Deposit £2 2s. Tenders by November 25.

Halifax, Yorks.—Alterations to existing building and drive to form garage accommodation at Stoodley House, for B.C. Documents from the Borough Engineer, Crossley Street, Halifax. Deposit £2 2s. Tenders by November 27.

Halifax, Yorks.—Decorating works to be undertaken at various schools during the Christmas holiday period, Dec. 22, 1961, to

Jan. 7, 1962, inclusive, for B.C. Documents from the Borough Engineer's Office, Crossley Street, Halifax. Deposit £1, cheques payable to Halifax Corporation. Tenders by Nov. 13.

Ilford, Essex. — Erection of following garages, for B.C.: Contract (a) 31, Padnall estate; (b) 36, Maypole estate; (c) 12, Oaks Lane estate, including substructure and carriageways, garages (post and panel type) will be supplied and erected by specialist sub-contractors. Contractors may either tender for all or for separate contracts. Documents from the Borough Engineer, Town Hall, Ilford. Deposit £2 2s. each contract. Tenders by November 21.

Inverness. — Painting of steel roof trusses, etc., at the corporation baths, for B.C. Documents from the Burgh Architect, 11 High Street, Inverness. Tenders by November 14.

Isle of Wight. — Re-erection of a sectional hut together with ancillary works as a youth centre, in Artic Road, Cowes, for C.C. Applications to the County Architect, County Hall, Newport, I. of W., by Nov. 13. Deposit £2 2s. Tenders by Dec. 13.

Leeds. — Interior painting of Kirkstall Road Works, for City Council. Documents from Transport General Manager, 1 Swinegate, Leeds, I. Tenders by Nov. 14.

Leicestershire. — Conversion of old telephone exchange to form new library at Narborough, for C.C. Applications to County Architect, 123 London Road, Leicester, by Nov. 6. Deposit £2 2s. Tenders by Nov. 20.

Leicestershire. — Repairs and redecoration at Loughborough College of Further Education, Shakespeare Street premises for C.C. Applications to County Architect, 123 London Road, Leicester, by Nov. 6. Deposit £2 2s. Tenders by Nov. 20.

Limavady, Londonderry. — Erection of greenhouse at St. Mary's Voluntary Intermediate Secondary School, Irish Green Street, for the Rev. J. McGarvey. Documents from M. A. Fitzpatrick, architect and surveyor, Strand Chambers, 16-18 Strand Road, Londonderry. Deposit £2 2s. Tenders by Nov. 10.

Lindsey. — Erection of John Leggott Grammar School, West Common Lane, Scunthorpe, for C.C., which contains approximately 62,650 sq. ft. of floor area. The school is divided into two main blocks, the north block containing approximately 24,800 sq. ft. and the south block approximately 37,850 sq. ft. of floor area. The type of construction generally is of load-bearing brick walls on concrete foundations with in-situ concrete ground floors, precast hollow beam suspended floors and asphalt covered timber flat roofs. Portions of both blocks are three-storey high. The south block together with one playground and about 75 per cent. of paved access roads and paths will be required to be completed not later than mid-August, 1963, and the whole of the works by end of June, 1964. Bill of Quantities available about the end of the third week in December, 1961, and tenders will be required for the end of January, 1962. Submit names to A. Ronald Clark, county architect, County Offices, Lincoln, from which a selected list will be made. Only contractors capable of completing the works within the period stated should apply.

Liverpool. — Extensions to Kirkdale Branch Library, for City Council. Documents from City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2. Deposit £2 2s., payable to City Treasurer. Tenders by November 10.

Longford, Eire. — Erection of factory premises at Ballymahon Road. Documents from Philip Ginnell, architect, 31 Pearse Street, Mullingar, and 33 Main Street, Longford. Deposit £20. Tenders by Nov. 11.

Lowestoft, Suffolk. — Following decorations, for B.C.: (1) Alderman Woodrow Secondary School, part internal; (2) Meadow Infant School, internal; (3) North Lowestoft Youth Club, internal; (4) South Lowestoft Youth Club, part internal. Documents from Borough Engineer's Office, 49 High Street, Lowestoft. Tenders by November 17.

Luton, Beds. — Builder's work in installation of electrically operated lift at The Mount, 107 London Road, for B.C. Documents from the Borough Architect, Town Hall, Luton. Tenders by Nov. 13.

Luton, Beds. — Preparation of foundations and associated works to receive extension to existing timber Customs Building, Municipal Airport, and decorations to the extension, for B.C. Documents from the Borough Architect, Town Hall, Luton. Tenders by Nov. 9.

Newcastle-under-Lyme, Staffs. — External painting of following for R.D.C. Contract 1—30 dwellings, Audley/Halmerend area; contract 2—40 dwellings, Madeley area; contract 3—32 dwellings, Ashley/Red Bull area. Documents from F. W. Ramm, clerk of the Council, Council Offices, Sidmouth Avenue, The Brampton, Newcastle, Staffs. Tenders by Nov. 9.

Newcastle upon Tyne. — Erection of a new laundry building, engineering workshops and stores at the General Hospital for Regional Hospital Board. The laundry will be steel framed of part two-storey and part single-storey construction, with brick and panel walls and a metal deck roof, and will contain an approximate floor area of 25,900 sq. ft. The workshops will be steel framed of single-storey construction, with brick walls and metal deck and precast concrete roofs, and will contain an approximate floor area of 18,200 sq. ft. Tender documents will be ready for issue to contractors during November, 1961, and it is expected that it will be possible for building operations to commence in early January, 1962. Submit names to the Secretary of the Board, Benfield Road, Newcastle upon Tyne, 6, by Nov. 8.

Northamptonshire. — (a) Building work; (b) oil-fired low-pressure heating, domestic hot water and cold water installations; or (c) electrical installation for a single-storey extension comprising hall, kitchen, cloaks, etc. and a two-storey classroom block, in load-bearing brickwork, and internal alterations to existing buildings, at Raunds Secondary Modern School, for C.C. Submit names to County Architect, County Hall, Northampton, by November 7.

Norwich. — Extensions to the Norwich City College, Ipswich Road, in two phases, for City Council. Documents from City Architect's Office, City Hall, Norwich. Tenders for contract (1) by December 13; for (2) May 14.

Orrell, Lancs. — Alterations to Council yard, for U.D.C. Tenders by Nov. 20.

Paignton, Devon. — Erection of public conveniences (area 1,330 sq. ft.), at Clennon Valley Sports Ground, for U.D.C. Documents from the Engineers and Surveyors Department, Municipal Offices, Oldway, Paignton. Deposit £2 2s. Tenders by November 17.

Portsmouth. — Modernisation, St. Faiths Road Flats, Landport, block 5-8 (four flats), for City Council. Applications to the Director of Housing, 1 Clarence Parade, Southsea, by Nov. 10. Deposit £1. It is a condition of tendering that the contractor shall, at the date of tender, have in his employment no less than one indentured apprentice to every eight craftsmen who were employed by him on the previous Jan. 1.

Portsmouth. — Modernisation of St. Faiths Road Flats, Landport, block 5-8 (four flats), for City Council. Applications to the Director of Housing, 1 Clarence Parade, Southsea, by Nov. 10. Deposit £1.

Radcliffe, Lancs. — Plastering of kitchens to 27 dwellings at Radcliffe Hall, estate, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Radcliffe. Tenders by November 14.

Ruislip—Northwood, Middx. — Construction of 110 garages on sites within the district, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Northwood. Deposit £2 2s. Tenders by November 15.

Rutherglen, Lanarks. — Erection of a suite of seven shops with 10 maisonettes above at Fernhill, for B.C. Applications to J. C. Russell, burg surveyor, Town Hall Buildings, Rutherglen, by Nov. 6.

Southport, Lancs. — Provision and erection of a sectional timber building in Pleasureland (40ft. x 25ft.), for B.C. Documents from Borough Engineer, P.O. Box 32, Town Hall, Southport. Tenders by December 7.

Stockton-on-Tees, Dur. — Erection of Hardwick Secondary Modern School for Girls, for B.C. Documents from the Borough Architect, 28 The Square, Stockton-on-Tees. Deposit £3 3s. Tenders by November 27.

Sunderland. — Erection of six shops-and-flats and garages, Gleneagles Road, Grindon Village estate, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Deposit £2 2s., cheques payable to Sunderland Corporation. Tenders by November 20.

Welwyn Garden City, Herts. — Erection of resident medical offices' and domestic hostels at the Welwyn/Hatfield New Hospital, Hollands, for the North West Metropolitan Regional Hospital Board. The work comprises two three-storey blocks, mainly in load-bearing brickwork, with concrete floors, the estimated cost of the project being approximately £135,000. It is anticipated that invitations to tender will be issued in November, 1961, and that work will commence in January, 1962. Applications, together with details of works carried out, and their value, should reach the Regional Architect, North West Metropolitan Regional Hospital Board, 40 Eastbourne Terrace, London, W.2, by November 7.

West Hartlepool, Dur. — Erection of St. Anne's R.C. Secondary Modern School, complete with all site works, playing fields, etc. Documents from Crawford and Spencer, architects, 91 Borough Road, Middlesbrough.

West Riding. — Adaptations to central porch to form scullery including, builder joiner and

plumbing services at Heckmondwike Battye Street School, for C.C. Documents from the office of the Divisional Architect, Flint Street, Huddersfield. Tenders by November 28.

West Riding. — Alterations of a horse hutment to provide dining accommodation at Thrybergh J.M.I. School, for C.C. Documents from the office of the Divisional Architect, Planet Road, Adwick-le-Street, Doncaster. Tenders by November 28.

West Riding. — Part internal decorations at the area and divisional offices, Station Road, Doncaster, for C.C. Documents from the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster. Tenders by November 27.

West Riding. — Internal renovations at the County Hall, Wakefield, for C.C. Documents from County Architect, Bishopsgarth, Westfield Road, Wakefield. Tenders by November 27.

Willenhall, Staffs. — Erection of 113 garages on different sites in the district, for U.D.C. Applications to the Architect, Town Hall, Willenhall, by Nov. 6. Deposit £3 3s.

CLOTHING AND TEXTILES

Birkenhead, Cheshire. — Supply of fire service uniform clothing, fire extinguishers, refills and hose reels for the 12 month ending March 31, 1963, for B.C. Documents from the Chief Officer, Fire Brigade Headquarters, Whitestone Lane, Birkenhead. Tenders by November 27.

Bury, Lancs. — Supply of uniform clothing for the Transport Department for a period of three years, deliveries to take place in specified amounts and at intervals during the period, for B.C. Documents from the General Manager and Engineer, Corporation Transport Department, Market Place, Bury. Tenders by November 11.

Mansfield, Notts. — Supply of the following, for B.C.: 33 blue serge suits, 18 pairs extra trousers, 20 uniform caps, 12 pairs navy serge trousers, four duffle coats (full length, with hood). The Council do not bind themselves to accept the lowest or any tender and reserve the right to divide the order should they deem it desirable. Tenders (with which samples of cloth must be supplied), enclosed in a plain sealed envelope and endorsed "Tender for Uniforms," to S. W. R. Christmas, town clerk, Carr Bank, Mansfield, by November 11.

Staffordshire. — Supply of uniform clothing for Staffordshire Potteries Water Board. Documents from C. V. Brown, Engineer and Manager and Clerk to the Board, Albion Street, Henley, Stoke-on-Trent. Tenders by Nov. 21.

DEMOLITION

Cardiff. — Demolition of house over entrance to Cleansing Depot, Railway Street, Splott, for City Council. Documents from the Building Maintenance Section, Trade Street, Cardiff. Deposit £2 2s., cheques payable to the Cardiff Corporation and crossed "Not Negotiable and Co." Tenders by November 8.

Gravesend, Kent. — Demolition of 18 houses in Eden Place for B.C. Documents from Borough Engineer and Surveyor (Ref. C4/4), 6 Woodville Terrace, Gravesend. Tenders by Nov. 13.

Irvine, Ayrs. — Uplifting, removal, and disposal and approximately 140 yards of single track, and the removal and disposal of approximately 330 yards of single rail which has already been uplifted, together with a quantity of sleepers and chairs at Irvine industrial estate for B.C. Further information obtained, and the opportunity to inspect arranged, on application to R. W. Morrison, Burgh Surveyor, Irvine. Tenders by Nov. 8.

Newtownabbey, Antrim. — Demolition of premises known as Abbeyhill, 306 Shore Road, for U.D.C. Documents from Allan R. Martin, clerk of the Council, Town Hall, Newtownabbey. Tenders by Nov. 22, extension of date.

Worksop, Notts. — Demolition of a public house, three shops with flats over, a motor repair shop and other buildings in the vicinity of the Provision Market, for B.C. Documents from the Borough Engineer, Park House, Worksop. Deposit £3 3s. Tenders by November 20.

ELECTRICAL

Cork, Eire. — Electric wiring at St. James and Male Infirmary Divisions, Block 8, St. Finbarr's Hospital, for the Health Authority. The work consists of the installation of: 198 lights, 50 plug sockets, with fuse distribution boards and switches. Documents from the Health Authority, Institutions and Assistance Section, City Hall, Cork. Deposit £10. Tenders by Nov. 10.

Down. — Electrical heating and lighting installation in the new clinic and library at Castlewellan, for C.C. Documents from Mr. Candless and Barton, 6 Murray Street, Belfast, I. Deposit £2. Tenders by 4 p.m., November 13, extension of date.

Down. — Electrical installation in Bangor Girls (New) Grammar School for C.C. Docu-

ments from McAuslan and Partners, consulting engineers, 16 Bedford Street, Belfast, 1. Deposit £5 5s. Tenders by Nov. 23.

Durham.—Electrical installation at Bowes Museum, Barnard Castle, for C.C. Application to the County Architect, South Street, Durham, by Nov. 8.

Enniskillen, Fermanagh.—Electrical installation in new kitchen at R.U.C. Depot, Enniskillen, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by November 14.

Hereford.—Electrical installation to 74 traditional houses on Newton Farm 6 site, for City Council. Documents from the City Architect, Town Hall, Hereford. Deposit £1 1s. Tenders by Nov. 24.

Londonderry.—Supply and erection at Coolkeeragh power station, of lighting and heating associated with No. 4 boiler and turbo-generator for the Electricity Board for Northern Ireland. Documents (specification NI.1642) from the Board's Consulting Engineers, Kennedy and Donkin, 64 Royal Exchange, Manchester 2 by Nov. 13. Deposit £5 5s., cheques payable to the Electricity Board for Northern Ireland. Tenders by Dec. 18.

Newcastle-under-Lyme, Staffs.—Electrical installation in following, for B.C.: Thistleberry Avenue—(contract 1) 27 old persons bungalows, tenants meeting hall and warden's flat including underfloor heating and bell warning system; (2) 5 blocks of flats, total of 30 dwellings, including underfloor heating, supply of spin dryers and built-in electric fires, 26 narrow frontage houses. Written application to the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, by November 6.

FENCING

***Bishop's Stortford, Herts.**—Supply of fencing for U.D.C. Tenders by Nov. 14.

Bournemouth, Hants.—Seafront railings, etc., corrosion prevention treatment, for B.C. Documents from Borough Engineer, Bournemouth. Deposit £2 2s. Tenders by November 14.

Carshalton, Surrey.—Supply and erection of approximately 330 lin. yd. of 6ft. high chain link fencing, at Corrigan Avenue, for U.D.C. Documents from the office of the Engineer and Surveyor, Stone Court, The Grove, Carshalton. Tenders by November 13.

Nantwich, Cheshire.—Taking up and refixing of new line approximately 60yd. of w.i. fencing and set of gates at the corner of Park View, for U.D.C. Further details from Engineer and Surveyor, Brookfield House, Nantwich. Tenders by November 20.

GAS AND WATER SUPPLY

Argyllshire.—Extension to the water supply at Colintraive, for C.C. The work consists of the laying of approximately 460 lin. yd. 3in. diameter A.C. mains. Submit names to the County Engineer, Lochgilphead, Argyll by November 4.

***Atcham, Salop.**—Pimhill water supply extensions for R.D.C. Deposit £5. Tenders by Jan. 8.

***Brighton, Sussex.**—Mainlaying, Falmer Hill area for B.C. Deposit £2 2s. Tenders by Nov. 29.

Drayton, Salop.—Sinking and lining with mild-steel tubes of a borehole 21in. (minimum) in diameter and of a total depth not exceeding 500ft. from ground level, and the carrying out of a pumping test thereon, at Ellerton, for R.D.C. Documents from A. H. S. Waters and Partners, consulting engineers, 25 Temple Row, Birmingham, 2. Deposit £5 5s. Tenders by November 17.

Edeyrnion, Merioneth.—Laying approximately 230yd. of 6in. diameter asbestos-cement pipe water mains, near Corwen, for R.D.C. Apply, in writing, to Richards and Dumbleton, consulting engineers, Cornwall Buildings, 45 Newhall Street, Birmingham, 3, and Greenways, Portmadoc, Caerns. Deposit £2, payable to Council. Plans seen at the offices of the Consulting Engineers, or Council Offices, Corwen. Tenders by November 7.

Hillsborough, Down.—Supplying and laying of the following approximate lengths of spun-iron pipes, together with all ancillary works, for R.D.C.: 4in. diameter, 9,650 lin. yd.; 5in. diameter, 3,230 lin. yd.; 6in. diameter, 270 lin. yd. Documents from William Barklie Maxwell, consulting engineer, 5 University Terrace, Belfast, 7. Deposit £5 5s. Tenders by November 13.

***Howden, Yorks.**—Construction of reservoir and laying water mains, Holme-on-Spalding Moor, contract 5, for R.D.C. Deposit £3 3s. Tenders by Nov. 24.

Larne, Antrim.—Magheramorne water extension, for R.D.C., comprising the supplying and laying approximately 2,234 lin. yd. of 4in. diameter spun iron water main, together with the necessary special pipes and fittings and everything required for the proper completion of the works. Documents

from the Council Offices, Prince's Gardens, Larne. Tenders by Nov. 8.

Mayo, Eire.—Construction of a water supply scheme in the village of Kilmaine, for C.C. The scope of the scheme includes the laying of approximately 46 lin. yd. of 6in. cast iron pipes class B, 1,485 lin. yd. of 4in. cast iron or polyvinyl chloride pipes class B, and the supply and installation of valves, fountains and other fittings. It also includes the construction of intake works, wall surround screening chamber and pump house. Documents from Edward R. Ryan, Council's consulting engineer, 1 Montpelier Tce., Galway, Eire. Deposit £25. Tenders by December 9.

Staffordshire.—Supply of 30in., 27in., 24in., 21in., 20in., 16in., 12in., 10in., 6in., 4in. and 3in. diameter cast-iron pipes and specials for Ladderedge Reservoir, contract 58, for the Staffordshire Potteries Water Board. Documents from C. V. Brown, engineer and manager and clerk to the board, Engineer and Manager's Office, Albion Street, Hanley, Stoke on Trent. Tenders by November 20.

Staffordshire.—Supply of 24in., 21in., 20in., 16in., 12in., 10in., 6in. and 4in. diameter sluice valves and penstocks for Ladderedge Reservoir, contract 59, for Staffordshire Potteries Water Board. Documents from C. V. Brown, engineer and manager and clerk to the board, Engineer and Manager's Office, Albion Street, Hanley, Stoke-in-Trent. Tenders by November 20.

Staffordshire.—Construction of a watertight concrete reservoir of 10m. gallons capacity, with mass concrete walls and precast prestressed concrete roof, precast columns, together with ancillary works, at Ladderedge, Longsdon, near Leek, contract 43, for the Staffordshire Potteries Water Board. Two separate Tenders are required: (1) Tender with variations in wages and materials. (2) Tender on fixed-price basis without any variation being allowed in wages and materials. Documents from C. V. Brown, Engineer and Manager and Clerk, Albion Street, Hanley, Stoke-on-Trent. Deposit £5 5s. cheque. Tenders by Nov. 20.

Stroud, Glos.—Alterations and construction of a reinforced concrete reservoir of approximately 2,000,000 gallons capacity on the Minchinhampton Common, for the Stroud District Water Board. Documents from the Engineer and Manager, Stroud District Water Board, 13 Wallbridge, Stroud. Deposit £3 3s. Tenders by Nov. 30.

Tewkesbury, Glos.—New pump house and river intake at Mythe waterworks, for the Cheltenham and Gloucester Water Board. Deposit £10. Tenders by Nov. 28.

West Cumberland.—Supply and installation of an electrically driven horizontal centrifugal pump (nominal duty point 1,500 g.p.m. to 75ft. head), together with starter, control gear, metering, valves and pipework, in booster station at Low Liza Bridge, Lorton, for the West Cumberland Water Board, documents from F. Clapham, Clerk of the Board, Stoneleigh, Park End Road, Workington, Cumb. Tenders by Nov. 20.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Kincardineshire.—Repair works and removal of rock at Johnshaven harbour, for C.C. Drawings seen at the office of the County Clerk, Stonehaven. Applications, in writing, for the documents, to Arch. Henderson and Partners, consulting engineers, 21 Bridge Street, Aberdeen. Deposit £2 2s. Tenders by Nov. 9.

HEATING AND VENTILATING

Cardiff.—Installation of heating and allied services at the Roath Park and Grangetown Schools, for City Council. Documents from the City Surveyor, City Hall, Cardiff. Deposit £4 4s., cheques payable to the Cardiff Corporation and crossed "Not Negotiable and Co." Tenders by November 17.

Daventry, Northants.—Installation of hot water supply systems and incidental work to 14 houses at 9-22 Queens Park, Weedon Beck, and 12 houses at 10-32 Brockhill Road, Flore. Documents from H. Bonsor, surveyor, Council Offices, Church Walk, Daventry. Tenders by Dec. 4.

Durham.—Sacriston County School—electric water heating installation, for C.C. Applications to the County Architect, South Street, Durham, by November 8.

Luton, Beds.—Heating installation, transport garage, central depot, Portland Road, for B.C. Documents from the Borough Architect, Town Hall, Luton. Tenders by December 4.

Newcastle upon Tyne.—Engineering services in connection with a new laundry and workshop. The contract will include laundry machinery, pipe work and valves, etc., at the General Hospital, for the Newcastle Regional Hospital Board. It is expected that it will be possible for this work to commence in January 1962. Submit names to the Secretary

of the Board, Benfield Road, Newcastle upon Tyne, 6, by November 4.

South Cambridgeshire.—Following for R.D.C.: Installation of hot and cold water services, provision of bathrooms, including w.c. suites, drainage work and incidental work to: (a) 28 houses, Cinques Road and Drove Road, Gamlingay; and (b) 10 houses, Joiners Road, Linton. Documents from Council's Architect and Surveyor, County Hall, Hobson Street, Cambridge. Deposit £2 2s. each contract. Tenders by November 21.

Stoke-on-Trent, Staffs.—Following, for City Council: (a) Heating installation—College of Art, College Road, Stoke, heating and h.w.s. installation; (b) electrical installations—College of Art, College Road, Stoke, electrical installation—Trentham/Hanford C.E. Junior School (phase II), electrical installation; (c) tarmac-adam resurfacing—Blessed Wm. Southerne R.C. Secondary School, resurface access to playground areas—Edensor C.E. School—resurface playground area—"Westcliffe," Turnhurst Road, Tunstall, resurface roadways; (d) demolition—Coronation Works and Property, Commerce Street, Longton; (e) miscellaneous—Ball Green C.S. School, library furniture. Written applications stating for which contract it is desired to tender, to the City Architect, Kingsway, Stoke-on-Trent, by November 7. Deposit £2 each contract. Electrical contractors tendering for (b) must be members of the National Federated Electrical Association, or be on the Roll of Approved Electrical Installation Contractors of the National Inspection Council for Electrical Installation Contracting. Tenders by December 1.

HOUSING SCHEMES

Andover, Hants.—Two blocks each of 22 flats and site works at London Road site for B.C. Documents from the Borough Engineer, Municipal Offices, Andover. Deposit £2 2s. Tenders by Nov. 24.

Aylesbury, Bucks.—Two bungalows at The Close, Great Lane, Bierton, for R.D.C. Documents from T. J. Ridley of Raymond White and Ridley, architects, 4 Temple Square, Aylesbury. Deposit £2. Tenders by Nov. 14.

Bath, Som.—Conversion of 48, Combe Park into three flats for City Council submit names to the City Planning Officer and Architect, 7 North Parade Buildings, Bath, by Nov. 8. Deposit £2 2s.

Bridge-Bleas, Kent.—Twenty dwellings at Fleets Lane, Hackington, near Canterbury, for R.D.C., comprising four pairs of two-bedroom houses, one block of four houses and one block of eight flats for old people, together with the provision of external services within and without the curtilage of the dwellings. Documents from the Council Offices, 41 Old Dover Road, Canterbury. Deposit £2 2s., cheques, etc., payable to Council. Prints of the drawings seen either at the office of H. V. Godfrey, Godfrey and Messenger, architect: 63 Oxford Street, Whistable, or at the Council Offices, 41 Old Dover Road, Canterbury. Tenders by November 20.

Calne, Wilts.—Redevelopment of Bollings Lane slum clearance area, for B.C., comprising demolition of existing property, the construction of roads and sewers, and the erection of three-storey flats, shops with flats over, and bungalows. Applications to George Brown and Partners, architects, Equity and Law Building, Baldwin Street, Bristol, 1. Deposit £2 2s.

Carlow, Eire.—Twelve semi-detached houses at Henry Street, Graiguenamanagh, for U.D.C. Documents from the Acting Town Clerk, Town Hall, Carlow. Deposit £10 10s. Tenders by Nov. 15.

Chelmsford, Essex.—Thirty-two old folk's flats at Meadgate estate, for B.C. Documents from the Borough Engineer, Municipal Offices, Coval Lane, Chelmsford. Deposit £2 2s. cheques payable to Chelmsford Corporation. Drawings seen at the office of William D. Key, architect, 3 Tindal Square, Chelmsford. Tenders by November 29.

Chelmsford, Essex.—Eighty four-storey flats at Meadgate estate, for B.C., comprising five four-storey blocks, each containing 16 flats, constructed of load bearing brick-work with reinforced concrete floors and stairs. Applications to B. A. Francis, town clerk, Municipal Offices, Chelmsford, should be accompanied by evidence of previous experience of work executed of a similar nature, together with the names of Architects or others from whom references can be obtained by November 7.

Elgin, Morays.—All trades for the erection of 26 three-roomed houses at Morriston, for City Council. Documents from John P. M. Wright, architect, 106 High Street, Elgin. Tenders by Nov. 13.

Evesham, Worcs.—External painting of houses within the Borough, at Hampton and the Fairfield estate, for B.C. There are two contracts: (1) 94 houses; and (2) 102 houses; and contractors may tender for either or both

contracts, but the contracts will be required to run concurrently. Documents from the Borough Surveyor, 106 High Street, Evesham. Deposit £2 2s. each set. Tenders by November 18.

Havant and Waterloo, Hants.—Ten houses, together with drainage and external works, at Mill Road, Waterloo, for U.D.C. Documents from Engineer and Surveyor, 1 Park Road North, Havant. Tenders by December 4.

Lancashire.—Two storey brick built house with tiled pitched roof, single garage and out-buildings at Chorley, for a fire station officer, for C.C. Applications to the County Architect, P.O. Box 26, County Hall, Preston, by November 6.

Leeds.—Separate tenders for traditional housing schemes, for City Council. (932)—67 bungalows, 34 houses and 3 garages at Iveson House, Moorfield and Queenshill; (933)—28 houses, 3 bungalows and 52 maisonettes and 77 garages at Half Mile Lane; (934)—326 houses, 12 bungalows and 75 garages at Belle Isle. Documents from the City Architect, Priestley House, Quarry Hill, Leeds 9. Deposit £2 each scheme, cheques payable to Leeds Corporation. Tenders by December 7.

Mablethorpe and Sutton, Lincs.—Construction of a pair of semi-detached bungalows in Sherwood Road, Mablethorpe, for U.D.C. Documents from the Council Offices, Mablethorpe. Tenders by Nov. 27.

Maidstone, Kent.—Fifty-eight houses (scheme P.W.12) at Park Wood estate for B.C. Documents from the Borough Engineer, Palace Avenue. Tenders by Nov. 20.

Morley, Yorks.—Following for B.C.: Moorhead estate, Gildersome, contract 10, 16 one-bedroom flats; Nepshaw Lane estate, Morley, contract 3, 40 one-bedroom flats. Documents from the Borough Engineer's Office, Town Hall, Morley. Deposit £2 2s. Tenders by Nov. 13.

Northampton.—Forty-one two-storey dwellings and 12 garages at Althorpe Street/Herbert Street, for B.C. Apply to the Borough Architect, Guildhall, Northampton, by November 6. Deposit £2 2s. cheque payable to Northampton Corporation. Tenders by December 8.

Nottingham.—Twenty-four maisonettes, 14 flats and seven bed-sitting-rooms, Pleasant Row, Hyson Green, for City Council. Applications to E. W. S. Martin, the estates surveyor and valuer, The Guildhall, Nottingham, by first post, Nov. 6. Deposit £2 2s., payable to Nottingham Corporation. Tenders by Dec. 5.

Oakengates, Salop.—Nine two-bedroom old persons' bungalows at Corfield Crescent, for U.D.C. The work includes all site work, drainage, etc., existing roads serve the site. Documents from the Engineer and Surveyor, Council Offices, Stafford Road, Oakengates. Deposit £3 3s. Tenders by November 22.

Paignton, Devon.—Block of 39 old people's flats, caretaker's accommodation. Scheme Y at junction of Brixham and Longstone roads, Tweenaway Cross, for U.D.C., consisting of 39 old people's flats with communal sitting-rooms and caretaker's accommodation, in traditional construction as one block, three storeys high, together with all necessary services, site works, paths and fencing. Submit names to Frank Charlesworth, clerk of the Council, Municipal Offices, Oldway, Paignton, by Nov. 11. Deposit £2 2s.

Pewsey, Wilts.—Nine bungalows and the construction of main site works at Dewey's Lane, Ludgershall, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Pewsey. Tenders by Nov. 17.

Portsmouth.—Seventy-eight flats and 47 garages, Clacton and Halstead Roads, contract III, for City Council. Apply to the City Architect, 1 Western Parade, Portsmouth, by November 6. Deposit £1. It is a condition of tendering that the contractor shall, at the date of his tender, have in his employment not less than one indentured apprentice to every eight craftsmen who were employed by him on the previous January 1.

Ploughley, Oxon.—Construction of two dwellings and ancillary works at Lower Heyford, for R.D.C. Works will include an abnormal amount of earth levelling. Documents from the Engineer and Surveyor, Council Offices, Bicester. Deposit £2. Tenders by November 16.

Settle, Yorks.—Following for R.D.C.: (a) One four block of one-bedroom bungalows at Park Crescent, Hellifield; (b) four pairs of one-bedroom bungalows at Burnmoor Crescent, Ingleton; (c) one four block of two-bedroom flats (two-storey) and two pairs of one-bedroom bungalows at Mill Close, Settle. Documents from Engineer and Surveyor, Town Hall, Settle. Deposit £3 3s. Tenders by November 24.

Stretford, Lancs.—One detached and four terraced houses, at the Sewage Works, Bradley Lane, for B.C. Documents from A. H. Perry, borough Engineer and Surveyor, Town Hall.

Stretford. Deposit £2 2s. Tenders by December 2.

Walsall, Staffs.—One six-storey block of 48 flats in precast R.C. Crosswall construction, eight three-storey block of flats and a block of six three-storey shops and maisonettes in load bearing brick crosswall construction, at Lower Farm estate, phase II, for B.C. Documents from the Borough Engineer and Surveyor, Council House, Walsall. Documents will be available on November 10. Deposit £2 2s. Tenders by December 1.

Wandsworth.—Two-storey block of 10 flats at Alston Road for B.C. Submit names and give details of experience, plant and technical and supervisory staff available, together with names of two technical and two financial referees, to J. Noel Martin, town clerk, Municipal Buildings, Wandsworth, S.W.18, by Nov. 8. Bills of quantities will be issued to selected contractors in due course. Drawings may be examined at the Borough Engineer and Architect's Department.

MATERIALS AND SUPPLIES

Aberdeen.—Supply of electric lamps to the Aberdeen Corporation Lighting Department during the year 1962, for City Council. Documents from the Superintendent of Lighting, 262 King Street, Aberdeen. Tenders by Nov. 27.

Ashton-under-Lyne, Lancs.—Supply of motor spirit, fuel oil, paraffin and lubricating oils for B.C. Applications for particulars of requirements, etc., enclosing stamped and addressed envelope, to G. A. Malone, town clerk, Town Hall, Ashton-under-Lyne. Tenders by Nov. 18.

Belfast.—Supply of gas meters during year commencing January 1, 1962, for City Council. Documents from Gas Works, Ormeau Road, Belfast, 7. Tenders by November 23.

Bournemouth, Hants.—Supply the following, for B.C.: (1) Twenty-five slow signs assembly, complete with lighting unit and post with base compartment; (2) (a) 100 lighting units for existing slow signs, (b) 100 switchgear boxes for fixing at foot of existing slow sign posts. The Council does not undertake to accept the lowest or any tender. Please quote on your own forms. Tenders, in plain sealed envelopes appropriately endorsed, but bearing no mark or name indicating the sender, to A. Lindsay Clegg, town clerk, Town Hall, Bournemouth, by November 10.

Bradford, Yorks.—Supply of 200 cast iron filter press plates, each 36in. square, for City Council. Documents from the Sewage Works Engineer and Manager, Esholt Hall, near Shipley, Yorks. Tenders by November 27.

Carlow, Eire.—Supply of stone chippings and gravel chippings as required by the Council for the year ending March 31, 1963, and alternatively for the three years ending March 31, 1965, for C.C. Documents from the County Secretary, Athy Road, Carlow. Tenders by Nov. 17.

Carlow, Eire.—Supply of prestressed concrete bridge beams to Orchard Bridge, Leighlinbridge, for C.C. The bridge, which is situated on the Carlow/Kilkenny Road (T.51), 6½ miles south of Carlow is 20ft. clear span and the width will be 24ft. Documents from J. F. Cassidy, secretary, Athy Road, Carlow. Deposit £5. Tenders by November 9.

***Derbyshire.**—Supply of oils, for C.C. Tenders by Nov. 15.

Durham.—Durham Johnston Grammar Technical School—metal work benches and fittings, for C.C. Application to the County Architect, South Street, Durham, by November 8.

Hampshire.—Supply of materials, for C.C. Refer to our issue of October 26, page 2089.

Havant and Waterloo, Hants.—Supply of materials for U.D.C. Refer to our issue of Oct. 26, page 2081. Tenders by Nov. 18.

Hillsborough, Down.—Supply to the Council Yard, Hillsborough for steelwork, asbestos sheeting and sliding door gear, for R.D.C. Documents from the Council Offices, Dublin Road, Lisburn. Tenders by November 14.

Horbury, Yorks.—Supply of fireplaces, dustbins, gas boilers, gas cookers, electric wash boilers, electric cookers and door furniture for eight bungalows to be erected at Golden Square, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Horbury. Tenders by Nov. 18.

Leeds.—Sewer ironwork stores during the contract period January 1, 1962, to December 31, 1962, for City Council. Documents from D. Currie, city engineer, Civic Hall, Leeds, 1. Tenders by November 17.

Monmouthshire.—Supply of furniture for Ebbw Vale College of Further Education, for C.C.: (1) General and special classroom furniture; (2) steel tubular furniture. Documents from Sydney Leyshon, county architect, Queen's Hill, Newport, Mon. Tenders by November 15.

Monmouthshire.—Supply of:— (a) Steel tubular furniture; (b) classroom wooden furniture, for Cwmbran St. Dials Infants' School, for C.C. Documents from Sydney Leyshon, county architect, Queen's Hill, Newport, Mon. Tenders by November 20.

Monmouthshire.—Supply of heavy workshop machinery, Ebbw Vale College of Further Education, for C.C. Documents from Sydney Leyshon, county architect, Queen's Hill, Newport, Mon. Tenders by November 20.

Nottinghamshire.—Supply of the following, required during the year commencing 1st April, 1962, for C.C.: (a) Dry and coated stone and slag and hot and cold asphalt; (b) tar, tar compounds, bituminous compounds and cold emulsions; (c) castings; (d) tools; (e) salt glazed stoneware pipes; (f) plastic white line material; (g) concrete products; (h) hire of surfacing machines; (i) hire of road rollers; (j) hire of heating and planing plant; (k) daywork haulage. Applicants must state the specific items for which they wish to tender, quoting the index letters shown above. Submit names to the County Surveyor, Shire Hall, Nottingham, by 10 a.m., November 13.

Salford, Lancs.—Supply to schools in the city of the following, for City Council: (1) Books; (2) stationery, apparatus, etc.; (3) art and craft materials; (4) needlework materials. Documents from the Director of Education, Chapel Street, Salford, 3. Tenders by November 27.

Stanley, Dur.—Supply of approximately 150 new baths and 80 new wash-hand basins, for U.D.C. Documents from the Engineer and Surveyor at Scott Street, Stanley. Tenders by November 13.

MISCELLANEOUS

Luton, Beds.—Supplying and fixing curtains and tracks, Challney C.S. Schools, for B.C. Documents from Borough Architect, Town Hall, Luton. Tenders by November 7.

Seaham, Dur.—Supply and installation of two 3in. diameter centrifugal self-priming pumps and summary gear at Northlea estate, for U.D.C. Documents from Engineer and Surveyor, Cliff House, Seaham, Co. Durham. Tenders by Nov. 6.

***Swansea.**—Derv and diesel oil installation, central depot, for B.C. Tenders by Nov. 29.

West Riding.—Supply of following, for C.C.: 10/7 concrete mixers (three); grass mower, pedestrian controlled, rotary type cutter (three). Documents from the Chief Mechanical Engineer, West Riding County Council, Highways and Bridges Department, Central Repair Depot, Loftus Park, near Wakefield. Requests for documents must indicate the items of plant for which the contractor is desirous of submitting tenders. Tenders by November 9.

PLANT AND MECHANICAL TRANSPORT

Bideford, Devon.—Supply of a Road Mac Loadadump, for B.C. Particulars from H. J. Denne, borough surveyor, Municipal Buildings, Bideford. Tenders by November 9.

***Blackpool, Lancs.**—Supply of weighbridge at Layton Highways Depot for B.C. Tenders by Nov. 24.

Bristol.—Supply of one self-propelled major pump on Bedford chassis during financial year ending 31st March, 1962, for the Fire Brigade. Documents from Chief Fire Officer, Fire Brigade Headquarters, Bridewell Street, Bristol, 1. Tenders by November 18.

Cowes, I. of W.—Supply and delivery to the Council's Depot, Victoria Grove, East Cowes, of one Austin 4-ton pick-up truck in grey colour, for U.D.C. Tenders are to allow for taking in part exchange Ford 5cwt. van JDL 791. Tenders in plain sealed envelopes, endorsed "Tender for Truck." to F. W. Hefford, clerk, Northwood House, Cowes, I. of W., by Nov. 10.

Isle of Wight.—Supply of the following vehicles and equipment, for C.C.: (1) one diesel Ferguson 35 tractor with drawbar and hydraulic trailer hitch; (2) one hydraulic compressor for use with Ferguson 35 tractor, complete with 60lb. paving breaker. Documents from the County Surveyor, County Hall, Newport. Tenders by Nov. 14.

Liverpool.—Supply of two 5cwt. vans for City Council. Documents from the City Engineer and Surveyor, Municipal Building, Liverpool, 2. Tenders by Nov. 15.

Melford, Suffolk.—Supply of a new 25 cu. yd. dual tip refuse collector for R.D.C. Particulars from the Surveyor and Senior Public Health Inspector, Council Offices, Chilton House, Newton Road, Sudbury. Tenders by Nov. 18.

PLAYING FIELDS, PARKS, ETC.

Bangor, Down.—Grading, levelling, draining, seeding and cultivation of proposed new playing fields at Rathgael, near Bangor, for the Malone and Whiteabbey Training Schools Management Board. Documents from W. H.

Stephens and Sons, quantity surveyors, 13 Donegall Square North, Belfast, 1. Deposit £5 5s. Plans seen at the offices of Architects Associated (N.I.), 54 Elmwood Avenue, Belfast, 9, or the quantity surveyors. Tenders by November 15.

Belfast.—Formation of playing fields at Orangefield site, for City Council. Documents from the City Architects Department, 40 Academy Street, Belfast, 1. Deposit £5, cheques payable to Belfast Corporation. Tenders by November 16.

Birmingham.—Laying out Woodland Garden of Rest, including construction of gravel paths, supply and planting of trees shrubs and hedges at Yardley Crematorium for City Council. Documents from the General Manager, Parks Department, Baskerville House, Civic Centre, Broad Street, Birmingham, 1. Deposit £2 2s. Tenders by Nov. 13.

Birmingham.—Layout of Orchard Garden of Rest, including construction of gravel paths, kerbing, supply and planting of ornamental trees, shrubs and herbaceous plants at Lodge Hill Crematorium, Selly Oak, for City Council. Documents from the General Manager, Parks Department, Baskerville House, Civil Centre, Broad Street, Birmingham, 1. Deposit £2 2s. Tenders by Nov. 13.

Ealing, Middx.—Layout of following, for B.C.: (1) Southern portion of Claypounds Recreation Ground; (2) 1st stage of Lime Tree Park, Northolt. Documents from the Parks Superintendent, Ealing Central Sports Ground, Horsenden Lane South, Perivale, Greenford, Middx. Deposit £2 per set. Tenders by noon, November 30.

Larne, Antrim.—Construction and maintenance of children's playground, shelter and store at Greenisland for R.D.C. Documents from the Council Offices, Prince's Gardens, Larne. Tenders by Nov. 8.

Salford, Lancs.—Development as a playground of land adjoining St. James's R.C. Junior School, Ellor Street, for City Council. Applications to W. and J. B. Ellis, architects, Barclays Bank Buildings, St. Helens, by 10 a.m., Nov. 6. Deposit £2 2s., payable to the Salford Education Committee. Tenders by Dec. 5.

ROADS, BRIDGES AND SITE WORKS

Andover, Hants.—Construction of site concrete and forecourts for prefabricated garages, eight at Hedges Close, Shipton Bellinger, and four at The Close, Hatherden, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Junction Road, Andover. Tenders by Nov. 16.

Armagh.—Reconstruction works, for C.C. 2,500 lin. yd. of the Portadown-Newry Road through Poynzpass village, 480 lin. yd. of Markethill-Tandragee Road, and 650 lin. yd. of Clare-Richhill Road, 1,340 lin. yd. of Ardmore Road near Lurgan. Documents from the County Surveyor's Office, 3 Charlemont Place, Armagh. Tenders by November 9.

Banbridge, Down.—Scarva Road improvement and reconstruction scheme stretching from the Urban District Boundary to the Downshire Bridge, a distance of 1,250 lin. yd., for U.D.C., comprising widening and adjustments to the horizontal and vertical alignment of the road including 15,000 cu. yd. bulk excavation, 8,000 cu. yd. filling, the provision of a surface water drainage system, bituminous macadam surfacing, flagged footpaths, kerbing and ancillary works. Documents from J. G. McKinney, engineer and surveyor, Town Hall, Banbridge. Deposit £5 5s. Tenders by Nov. 27.

Bath, Som.—Construction of footpaths, crossings and ancillary work at Twerton/Whiteway housing estate, contract 3, for City Council. Documents from the City and Waterworks Engineer, Guildhall, Bath. Deposit £2 2s. Tenders by November 7.

Birmingham.—Footbridge in Calthorpe Park, for City Council. Deposit £2 2s. Tenders by Nov. 23.

Bournemouth, Hants.—Construction of an approach road and retaining walls for central car park at Upper Hinton Road, for B.C. Documents from the Borough Engineer, Town Hall, Bournemouth. Deposit £1 1s. Tenders by November 10.

Bridgwater, Som.—Demolition and rebuilding of garden buildings and walls, bulk excavation and the construction of 730 sq. yd. of tarmacadam carriageway and footpath, together with gully connections and ancillary work, for Hamp Street widening, for B.C. Documents from the Borough Engineer, Town Hall, Bridgwater. Deposit £2 2s. Tenders by Nov. 6.

Cambridgeshire.—Reconstruction of London-Norwich Trunk Road, A.11 at junction with route A.505, contract C.6117 for C.C. Tenders by Nov. 11.

Caterham and Warlingham, Surrey.—Reconstruction of the existing carriageway, kerbs

and footpaths in Mount Pleasant Road, Caterham, for U.D.C. The works comprise the laying of about 245 lin. yd. of new kerb and 150 lin. yd. of path edging, the provision of a new foundation and surface to about 550 sq. yd. of carriageway, and about 450 sq. yd. of footpath, together with incidental works. Documents from the Engineer and Surveyor, Council Offices, Caterham. Tenders by November 10.

Coventry.—Widening and reconstruction of Blackberry Lane, between Wyken Croft Junction and Lyng Hall School entrance, for City Council. The work includes approximately 3,000 sq. yd. of lean-mix concrete base, 3,500 sq. yd. bituminous surfacing, and 150 lin. yd. of s.w. sewer up to 2lin. diameter. Documents from the City Engineer, Council House, Coventry. Deposit £5. Tenders by Nov. 6.

Derbyshire.—Road improvement at Cromford Hill, B.5036, Cromford, for C.C., comprising approximately 3,000 cu. yd. of excavation and 600 lin. yd. roadworks. Documents from the County Surveyor, County Offices, Matlock. Deposit £2 2s, cheques payable to Council. Tenders by November 20.

Downpatrick, Down.—Improvements at Church Lane, Dundrum, for R.D.C. Documents from the Engineer's Office, Quoile Road, Downpatrick. Tenders by November 10.

East Suffolk.—Reconstruction of about 800 lin. yd. of trunk road, A.45, between Bayham and Great Blakenham, contract 48, for C.C. Construction will comprise granular sub-base; 8in. lean concrete base, and hot rolled asphalt surfacing; kerbing, drainage and footpath are also included. Duration of contract: four months. Documents from County Surveyor, County Hall, Ipswich. Deposit £10. Tenders by November 15.

Ennerdale, Cumb.—Following for R.D.C. (a) Frizingon housing—construction of roads and the laying of watermains and sewers to serve 80 houses to be erected adjoining Yeathouse Road, Frizingdon; (b) St. Bees water—laying of 370 yards of 6 in. watermain at St. Bees. Documents from the Engineer and Surveyor, Council Chambers, Cleator, Cumb. Tenders by Nov. 16.

***Essex.**—Rayleigh Spur Road, Stage 1, Rawreth diversion for C.C. Deposit £15. Tenders by Dec. 11.

***Falsworth, Lancs.**—Roads and sewers (second extension) at Brierley Avenue estate, for U.D.C. Deposit £2 2s. Tenders by Dec. 2.

***Farnborough, Hants.**—Making-up part of Farnborough Road for U.D.C. Tenders by Nov. 30.

Fifeshire.—Improvement of route B.927 at Danderfield, two miles north of Leven, for C.C. The works comprise the realignment and regrading of this road at its junction with the Lundin Links road and include the construction of a carriageway 200yd. in length and 20ft. wide with two grass verges each 6ft. wide. Documents from the County Surveyor, Belfield, Cupar, Fife, where the drawings may be examined, by appointment. Deposit £2 2s. Tenders by November 15.

Fifeshire.—Reconstructing the trunk road A.985 and Crossford Road, in the vicinity of Broomhall Bridge, Lochmuir, for C.C. The roadworks extend to 3,500ft. on the trunk road and 1,500ft. on the Crossford Road. The works include the site clearance, fencing, drainage, earthworks and the construction of carriageways, footways and verges. Documents from the County Surveyor, Belfield, Cupar, Fife, where drawings may be examined, by appointment. Deposit £2 2s. cheque Tenders by November 17.

Friern Barnet, Middx.—Construction of a lay-by in lean-mix and tarmacadam at Friary Road, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, N.11. Tenders by November 13.

***Glamorgan.**—Making good King's Avenue, Radyr, Cardiff, for C.C. Deposit £3. Tenders by Nov. 27.

Glamorgan.—Making good of St. Quentin's Close, Llanblethian, Cowbridge, for C.C. Principal works comprising the following: Carriageway, 700 sq. yd.; footways, 500 sq. yd.; kerbing, 250 lin. yd.; stormwater drainage and incidental works, 60 lin. yd. Documents from the County Surveyor, County Hall, Cardiff. Deposit £3. Tenders by November 22.

Gosport, Hants.—Advance preparation of roads and sewers, site E, Rowney housing estate, for B.C. Deposit £2 2s. Tenders by Nov. 22.

Heanor, Derby.—Widening High Street, Loscoe, and construction of a footpath on the south west side length 200yds., for U.D.C. Documents from J. H. Garside, engineer and surveyor, Council Offices, Ilkeston Road, Heanor. Deposit £3 3s. Tenders by Nov. 17.

Hereford.—Improvement of Folly Lane, section 2, for City Council. The work comprises the provision of pitched foundation, kerbing, channelling, macadam surfacing and all incidental works, approximate carriageway area 2,700 sq. yd. Documents from the office

of the City Surveyor, Town Hall, Hereford. Deposit £2 2s. Tenders by Nov. 17.

***Herefordshire.**—Improvement of Newport-Shrewsbury trunk road between Wormbridge and Highfield for C.C. Deposit £5 5s. Tenders by Nov. 20.

Holderness, Yorks.—Construction of approximately 1,140 sq. yd. of concrete carriageway, 580 sq. yd. of concrete footpath, 410 lin. yd. of concrete kerb and 450 lin. yd. of 4in., 6in. and 9in. drains at Patrington, for R.D.C. Documents from H. L. Ingham, Council's surveyor, Council Offices, Skirwith. Deposit £2 2s. Tenders by Nov. 15.

Holland.—Reconstruction of Sharpe's Bridge and approach roads, for C.C. The contract provides for the construction of a three span prestressed beam bridge, piled abutments and piers and 360yds. of new carriageway. Documents from the County Surveyor, County Hall, Boston. Deposit £2. Tenders by Dec. 11.

Inverness.—Construction of approximately 100 lin. yd. of 42ft. roadway, including a 15in. diameter fireclay sewer and excavation for a 6in. diameter water main, and ancillary works, for B.C. Documents from the Burgh Surveyor, Town House, Inverness. Tenders by Nov. 18.

Inverness.—Reconstruction of Young Street and part of Tomnahurich Street, for B.C., the contract includes the construction of approximately 3,000 sq. yd. of carriageway, 1,000 sq. yd. of flagged footpaths and all other ancillary works. Documents from the Burgh Surveyor, Town House, Inverness. Tenders by Nov. 18.

Inverness.—Construction of an access road and site levelling at Balnain Housing Site, Drumnadrochit, for B.C. Documents from the County Surveyor, Ardross Street, Inverness. Tenders by Nov. 17.

***Isle of Wight.**—Widening of approximately 280yd. of New Road, Brading, together with ancillary works, including new retaining walls, for C.C. Documents from the County Surveyor, County Hall, Newport. Deposit £2 2s. Tenders by November 9.

Lanarkshire.—Road and bridge improvements on trunk road, A.74, between Parkhead and Duneaton, for Scottish Home Department. The works include the construction of six miles of dual carriageways, with accompanying side roads, culverts, bridge over Duneaton Water, and other ancillary works. Documents from Babtie, Shaw and Morton, engineers, C.C.E., 17 Blythswood Square, Glasgow, C.2. Deposit £20, cheque payable to the Order of the Queen's and Lord Treasurer's Remembrancer. Tenders by December 5.

Leylane, Lancs.—Private street works at Hough Lane Group, for U.D.C. The works include the construction of approximately 2,560 sq. yd. of hot rolled asphalt surfacing with wet-mix foundation, 3,380 sq. yd. of tarmacadam surfacing with hardcore foundation, 4,680 sq. yd. of concrete slab back streets, together with flagged footways, kerbing, channelling and surface water drainage. Documents from F. D. Howe, engineer and surveyor, Council Offices, Leyland. Deposit £2 2s. Tenders by November 6.

Londonderry.—Reconstruction of Londonderry to Limavady trunk road, T.7, from Drummanagh to Tullybristol for C.C. The work comprises the construction of approximately two miles of new carriageway in bituminous macadam with hard shoulders, and involves approximately 55,000 cu. yd. of excavation, together with ancillary works. The work will also include the building of a 10ft. square twin box reinforced concrete culvert and wingwalls. Documents from H. K. Scott, county surveyor, Courthouse, Coleraine. Deposit £5. Tenders by Nov. 14.

***Middleton, Lancs.**—Construction of bus terminus at Langley estate for B.C. Deposit £2 2s. Tenders by Nov. 8.

Newcastle-under-Lyme, Staffs.—Downing Street, Silverdale, completion works, for B.C. 600 lin. yd. kerbing and channeling, 960 sq. yd. carriageway construction, 2,000 sq. yd. carriageway surfacing, 1,460 sq. yd. footway surfacing, 950 lin. yd. concrete edging, 80 lin. yd. 24in. diameter concrete pipes. Documents from the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs. Tenders by November 13.

Neston, Cheshire.—Construction of roads and sewers (phase II), Clayhill housing estate, and associated surface water sewer, Liverpool Road, for B.C. Documents from the Engineer / Surveyor, Town Hall, Neston, Wirral. Tenders by November 17.

Newtownabbey, Antrim.—Following, for U.D.C. (a) Private street works—Portland Avenue; (b) road construction—Drum Villas, Link Road. Documents for either project, from the Town Surveyor, Town Hall, Newtownabbey. Deposit £5. Tenders by November 20.

Newton Abbot, Devon.—Certain work at Forde Road, for U.D.C., comprising approximately 300 lin. yd. kerb, channel, make-up footpath and road haunch; 350 sq. yd. make-up

carriageway, provision of five new street lamps, and some drainage work. Documents from the Surveyor's Office, 18 Devon Square. Tenders by November 11.

North Riding.—Supply and erection of fabricated steelwork in the superstructure of the bridge of the River Ure, for C.C. Documents from County Surveyor, County Hall, Northallerton. Deposit £5. Tenders by Dec. 14.

Northwich, Ches.—Construction of road and drainage works off London Road, for U.D.C., including approximately 3,500 cu. yd. of excavation; 2,500 sq. yd. of ashes, hardcore macadam and surface dressing; 640 lin. yd. of 5in. by 10in. kerb; 450 lin. yd. of 6in. diameter s.g.w. pipes, together with all necessary ancillary works. Documents from the Engineer and Surveyor, The Council House, Northwich. Tenders by November 13.

Norton, Yorks.—Widening and surfacing an estate road at Preston Hill, Leavening, near Malton, consisting of approximately 60 lin. yd. of kerbing and 340 super. yd. of tarmacadam surfacing, for R.D.C. Documents from A. H. and B. D. Greenhalgh, architects, 57 Market Place, Malton. Tenders by November 9.

Oldbury, Worcs.—Provision and laying of approximately 680 tons of bituminous macadam and approximately 2,350 sq. yd. of hot rolled asphalt and dense tar surfacing at Lion Farm estate and Kingsway East, contract 61/13, for B.C. Documents from the Borough Engineer and Surveyor, Municipal Bank Chambers, Oldbury. Deposit £2 2s. (cheques payable to the Borough of Oldbury). Tenders by Nov. 16.

Paignton, Devon.—Construction of approximately 450ft. of sewers, roads and pavings, in section I of Waterleat Road, for U.D.C. Documents from the Engineer and Surveyor, Municipal Offices, Oldway, Paignton. Tenders by November 11.

Rugby, War.—Construction of road and sewer works at the Council's housing site at Warren Field, Ryton-on-Dunsmore, for R.D.C. Documents from the Council's Surveyor, 16 Warwick Street, Rugby. Deposit £3 3s. payable to Council. Tenders by November 17.

Rushden, Northants.—Work at Rushden Cemetery for U.D.C., comprising the removal of trees and gravestones, the ploughing and re-seeding of a grassed plot, and the provision of a paved area. Documents from the Engineer and Surveyor, Council Buildings, Rushden. Tenders by Nov. 9.

Smallburgh, Norfolk.—Road and ancillary works, Happisburgh, for R.D.C. Work includes provision of surface water and foul drainage, forming kerbing surfacing and completion of approximately 2,600 super. yd. of estate carriageway and footpaths. Plans seen at Surveyor's Office. Applications to Alan E. Crisp, clerk of the Council, Council Chambers, Stalham, Norwich, by November 4. Tenders by December 1.

Southampton.—Making-up of various roads, contracts PSW 87, 88 and 90 for B.C. Applications by Nov. 30.

Southampton.—Divided carriageway, Old Redbridge Road junction, comprising 600 lin. yd. precast concrete kerb, 1,200 sq. yd. (approximately) of 8in. reinforced concrete base slab and asphalt surfacing and ancillary works thereto, contract S.133, for B.C. Applications to the Borough Engineer, Civic Centre, Southampton, by Nov. 2.

Southport, Lancs.—Stanley Road housing site extension III for B.C. Deposit £2 2s. Tenders by Nov. 18.

Sutton Coldfield, War.—Improvement works at Springfield Road for B.C. Deposit £2. Tenders by Nov. 22.

Tottenham, Middx.—Reconstruction of a length of Hermitage Road, extending from the railway bridge to a point about 270yd. south-westwards of the bridge for B.C. The work includes the taking-up and re-laying approximately 400 lin. yd. of granite kerb and 1,250 sq. yd. of artificial stone paving. Approximately 2,000 sq. yd. of carriageway is to be scarified and regulated to a new profile, and over the whole area 3in. of hot rolled asphalt will be laid in two courses. Documents from the Borough Engineer's Department, Town Hall, Tottenham, N.15. Deposit £2. Tenders by Nov. 17.

Wednesbury, Staffs.—Making up of Brookside, for B.C., comprising the construction of approximately 150 lin. yd. of carriageway foundation and laying of hot rolled asphalt surfacing, the surfacing of footways with cold asphalt and ancillary works. Documents from the Borough Engineer and Surveyor, Town Hall, Wednesbury. Deposit £3 3s. cheque payable to Wednesbury Corporation. Tenders by Nov. 14.

West Riding.—Following works on various trunk and county roads in the county area, for C.C.: Heating and planing of carriageways; supply of white plastic material and its application in the form of traffic lines, arrows and other specified markings, also supply and application of white plastic material incorporating reflecting medium; surface

dressing by pressure sprayer (application of binder and chippings); fixing and taking-up and refixing of reflecting roadstuds. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Tenders by November 13.

West Riding.—Redecking of the swing span of Boothferry Bridge carrying the Widmerpool-Howden trunk road, A.614, over the River Ouse for C.C. The contract will include for the removal of the existing timber deck on the long arm of the swing span and its replacement by a steel deck surfaced with mastic asphalt. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £5, cheques, etc., crossed and payable to the West Riding Treasurer. Tenders by Nov. 27.

West Riding.—Conversion from hand to power operation to Thorne swing bridge on the Widmerpool-Howden trunk road, A.614, in the rural district of Thorne for C.C. The contract will cover the application of power operation to the wedge extraction and bridge-turning mechanism in place of the existing hand-operated mechanism. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £5 (cheques, etc., crossed and payable to the West Riding Treasurer). Tenders by Nov. 20.

West Riding.—Provision of additional hard playing surface at Ravenfield J.M.I. School, for C.C. Documents from the office of the Divisional Architect, Planet Road, Adwick-le-Street, Doncaster. Tenders by November 28.

West Sussex.—Reconstruction of Stocks Lane bridge at East Wittering, for River Board. Documents from J. R. A. Garland, Chief Engineer to the Board, County Hall, Chichester. Deposit £2 2s. Tenders by Nov. 20.

York.—Repairs to East Parapet, Queen Street Bridge, for City Council. The contract will include the repair by cement gun of the existing reinforced concrete parapet girder on the east side of the bridge. Documents from Chas. J. Minter, city engineer, surveyor and planning officer, 7 St. Leonard's Place, York. Deposit £1, cheques, etc., crossed and payable to York Corporation. Tenders by November 7.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Abingdon, Berks.—Main drainage of Wootton Road, stage III, W11/1 contract 2, for R.D.C. Deposit £3 3s. Tenders by Dec. 4.

Amphill, Beds.—Laying of approximately 303yd. of 6in. s.w.g. pipes and the construction of six manholes at Sandy Lane, Aspley Heath, for R.D.C. Documents from the Engineer and Surveyor The Limes, Dunstable Road, Ampthill. Deposit £1 1s. Tenders by November 20.

Bathavon, Som.—Peasedown St. John sewerage extensions, contract 4a for R.D.C. Deposit £5 5s. Tenders by Dec. 4.

Bolton, Lancs.—Sinking of 23 trial boreholes on the site of the Ringley fold sewage treatment works, for Bolton and District Sewerage Board. Documents from the Engineer to the Board, Town Hall, Bolton. Deposit £5 5s. Tenders by Nov. 20.

Bristol.—Construction of generating station and sludge digestion plant at the proposed new sewage treatment works of King's Weston Lane, Avonmouth, contract 17, for City Council. Works include heavy piled foundations, excavations in soft alluvium construction of a generating station of 2,500-kVA capacity complete with workshop, four reinforced concrete heated primary sludge digestion tanks of 2.4 million gallons capacity, together with heat exchanger building with heat exchangers and pumps, two open reinforced concrete secondary sludge digestion tanks of 0.9 million gallons capacity and a steel tank and gasholder of 56,000 cu. ft. capacity on, and including, a piled reinforced concrete raft. Also included in the contract will be site works, roads, footpaths, water mains, and miscellaneous pipeworks. Provision and installation of generating plant for generating station is subject to separate contract. Documents from City Engineer and Planning Officer, Cabot House, Deanery Road, Bristol, I. Deposit £10 (cheque payable to City Council). Tenders by Nov. 27.

Chelmsford, Essex.—Sewer extension at Bells Chase—Great Baddow, for R.D.C., comprising the provision, laying and jointing of approximately 65 lin. yd. of sewer in 6in. glazed stoneware pipes and two pre-cast concrete ring manholes. Documents from the Engineer and Surveyor, Rural District Council Offices, New London Road, Chelmsford. Deposit £1 1s. Tenders by November 20.

Chesterfield, Derbys.—Sewerage scheme at Heath, for R.D.C., comprising 2,437 lin. yd. of 6in. diameter flexible salt-glazed stoneware gravity sewer; 510 lin. yd. of 4in. diameter asbestos-cement rising main; 34 precast concrete manholes and a pumping station for two

120 g.p.m. pumps. Documents from J. B. Wikeley, engineer and surveyor, Rural Council House, Saltergate, Chesterfield. Deposit £2 2s. Tenders by November 9.

Cookstown, Tyrone.—Maloon and Aughlish sewerage scheme for R.D.C., comprising the laying of approximately 300yd. of 9in. diameter sewer and 500yd. of 4in. diameter pumping mains, together with manholes, pumphouse, path and fence. Documents from the Rural Council Offices, The Boardroom, Cookstown. Deposit £3 3s. Tenders by Nov. 10.

Darwen, Lancs.—Reconstruction and re-draining of three sludge drying beds at Hollins Sewage Works, for B.C. Work includes the construction of three reinforced concrete dividing walls, approximately 12s cu. yd. of concrete, the laying of 600 lin. yd. of under drainage and refilling beds with 1,300 cu. yd. of graded stone. Documents from Borough Engineers Office, Municipal Buildings, Darwen. Deposit £2 2s. Tenders by November 13.

Easingwold, Yorks.—Construction of 1,000 lin. yd. of 6in. diameter sewers with manholes and other ancillary work, 650 lin. yd. of 4in. and 6in. diameter house connections, 1,935 lin. yd. of 3in. diameter rising main, two pumphouses and pumpwells and extensions to existing sewage disposal works at Linton-upon-Ouse, for R.D.C. Documents from the Housing Surveyor, Council Offices, Stillington Road, Easingwold. Deposit £2 2s. cheque. Further details from D. H. Moore, Council's consulting engineer, 12 Valley Bridge Parade, Scarborough. Tenders by November 30.

Frimley and Camberley, Surrey.—Construction of Frimley Road-Field Lane surface water sewer, for U.D.C., having a total length of approximately 1,160yd. and comprising 39in., 36in. and 30in. diameter thick walled reinforced granite concrete pipes with cornelius flexible joints, all ancillary works including concrete manholes, and deepening, widening and realigning the outfall ditch for a length of approximately 300yd., and replacing all culverts with 39in. diameter reinforced concrete pipes as before. Documents from the Engineer and Surveyor, Municipal Buildings, Camberley. Tenders by November 20.

Frinton and Walton, Essex.—Main intercepting sewer for Walton and The Naze, contract I for U.D.C. Deposit £5 5s. Tenders by Nov. 27.

Gateshead, Dur.—Laying of a subsoil drain near Tyne Main Road, for B.C., comprising the laying of approximately 210yd. of twin 6in. diameter pitch fibre piping at depths averaging 14ft., together with appropriate manholes. Documents from the Borough Surveyor, Municipal Buildings, Swinburne Street, Gateshead, 8. Deposit £2, cheque payable to Borough Treasurer. Tenders by November 8.

Godstone, Surrey.—Installation of two 5in. diameter submersible pumps, driven by 10 h.p. electric motors, together with the laying of approximately 200yd. of 10in. diameter asbestos-cement rising main, and ancillary works, at Burstow sewage disposal works, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Oxted. Deposit £2 2s. Tenders by November 22.

Hartismere, Suffolk.—Bacton sewerage and sewage disposal scheme for R.D.C. Deposit £5 5s. Tenders by Nov. 30.

Heanor, Derbys.—Sewerage works at Aldred's Lane pumping station, for U.D.C. Works comprise the laying of approximately 68yd. of 18in. and 21in. spun iron pipes and 9yd. of 6in. salt glazed ware pipes. Documents from J. H. Garside, engineer and surveyor, Council Offices, Ilkeston Road, Heanor. Deposit £3 3s. Tenders by Nov. 17.

Heanor, Derbys.—Re-laying a 9in. sewer at High Street, Loscoe, for U.D.C. Works comprise the re-laying of approximately 346 yards of 9in. salt glazed ware sewer. Documents from J. H. Garside, engineer and surveyor, Council Offices, Ilkeston Road, Heanor. Deposit £3 3s. Tenders by Nov. 17.

Hornchurch, Essex.—Supply, on or after April 2, 1962, of the following for the sewage pumping station, Parsonage Road, Rainham, for U.D.C.: (1) Sewage pumping plant, electric motors and ancillary equipment, wiring and pipework, valves and fittings, with the services of a skilled fitter subsequently to supervise the erection of the plant on site (the proposed pumping station is required to deal with crude sewage at a maximum rate of approximately 275 g.p.m.); and/or (2) ironwork, including a manhole cover and frame, a penstock, and galvanised mild steel ladders and handrails. Documents from the Engineer and Surveyor, Council Offices, Billet Lane, Hornchurch. Deposit £2 2s. Tenders by November 13.

Hornchurch, Essex.—Construction of a soil sewer at Roneo Corner, for U.D.C. The works comprise the construction of approximately 75 lin. yd. of 15in. diameter, 120 lin. yd. of 18in. diameter and 170 lin. yd. of 21in. diameter concrete pipe sewer, with 3 in-situ concrete manholes, 5 manholes in brickwork and ancillary works. Documents

from the Engineer and Surveyor, Council Offices, Billet Lane, Hornchurch. Deposit £2 2s. Tenders by Nov. 20.

Isle of Man.—Construction and laying of a drainage scheme at Ballakillowie in the parish of Rushen, for Local Government Board. Documents from the Architect and Planning Officer, Murray House, Douglas. Deposit £2 2s., payable to the Government Treasurer. Tenders by Nov. 22.

Knaresborough, Yorks.—Supply and installation of dual mechanically raked screens at the sewage works, Wetherby Road, for U.D.C. Documents from the Engineer and Surveyor, Knaresborough House, Knaresborough. Tenders by Nov. 13.

Leatherhead, Surrey.—Laying approximately 180 lin. yd. of soil relief sewers in Ashstead, Surrey, including a thrust bore under the railway line, for U.D.C. Documents from the Engineer and Surveyor's Department, Red House, Leatherhead. Tenders by November 6.

Long Eaton, Derby.—Construction of 146 lin. yds. of 9in. diameter sewer and two manholes at Acton Grove, for U.D.C. Documents from Francis Turner, engineer and surveyor, Town Hall, Long Eaton. Tenders by Nov. 24.

Middlesex.—Supply and erection of seven radial type primary sedimentation tank sludge scrapers, with electrical equipment, for existing 95ft. diameter tanks, at Mogden Works, Isleworth, for C.C. Documents from Chief Engineer, Middlesex County Main Drainage Department, P.O. Box 7, Isleworth. Tenders by December 4.

***Reading, Berks.**—Halls Road foul sewer for B.C. Deposit £2 2s. Tenders by Dec. 4.

West Kesteven, Lincs.—Laying of about 2,750 yd. of 6in. and 9in. diameter pipe sewers, and the construction of a sewage disposal works comprising settlement tank, bacterial filter 56ft. diameter, humus tank, sludge drying beds and pumping station, etc., at Ancaster, about 8 miles North-East of Grantham, for R.D.C. Documents from the Offices of the Council's consulting engineers, Elliott and Brown, Stanley House, Pelham Road, Nottingham. Deposit £5 5s. cheque payable to Council. Tenders by November 24.

STREET LIGHTING

Batley, Yorks.—Supply of group A lighting for B.C.: Twenty-one reinforced concrete columns; 21 sodium lanterns, lamps and control gear; 21 solar dial time switches. Tenderer may tender for whole or part of the equipment. Documents from the Borough Engineer and Surveyor, Hanover Street, Batley. Tenders by Nov. 11.

Dartford, Kent.—Supply and erection of 15 complete lighting units, comprising 15ft. tubular steel columns, 80-watt mercury vapour lamps and lanterns, at Temple Hill (site 2c) for B.C. Documents from Thos. Armstrong town clerk, Council Offices, Dartford. Deposit £2 2s. Tenders by November 28.

***Dartford, Kent.**—Group A street lighting, Watling Street (part) for B.C. Deposit £2 2s. Tenders by Nov. 28.

Dun Laoghaire, Eire.—Provision of public lighting at Loughlin's own section of Bray Road improvement scheme, for B.C. Documents from Town Clerk, Town Hall, Dun Laoghaire. Deposit £5. Tenders by Nov. 14.

Dun Laoghaire, Eire.—Supply of steel lighting columns for public lighting scheme at Bray Road, Loughlinstown, for B.C. Documents from Town Clerk, Town Hall, Dun Laoghaire. Tenders by Nov. 7.

Edinburgh.—Supply, installation, connecting up and testing of street lighting for Pitreavie Junction, Admiralty Road Flyover and Ferry Toll Junction on the northern approach roads, and for the toll area, car park and Echline Flyover on the southern approach roads now being constructed in connection with the Forth Road Bridge, for the Bridge Joint Board. The installations consist of 200-W and 140-W sodium lamps in cut-off and non cut-off lanterns mounted at 25ft. and 35ft. height on steel columns, together with some special lighting and illuminated bollards. About 74 lanterns are involved on the northern approach and 114 on the southern approach. Documents from Mott, Hay and Anderson, consulting engineers, 9 Idesleigh House, Caxton Street, London, S.W.1. Tenders by Nov. 20.

Linlithgow, West Lothian.—Erection of 37 class B tubular steel lighting columns, together with the supply and erection of lanterns, lamps and gear, for B.C. Documents from James Flett, burgh surveyor, Council Offices, 39/41 High Street, Linlithgow. Tenders by November 27.

Petersfield, Hants.—Supply and erection of Group A lighting installations as follows, for R.D.C.: (1) 36 columns with one bracket together with 26 140 watt sodium lanterns, all ancillary gear and fittings, and wiring of equipment, at London Road, Liphook; (2) 36 columns with 36 140 watt sodium lanterns, all ancillary gear and fittings, and wiring of

equipment at London and Portsmouth Roads, Horndean. Documents from G. H. Walker, clerk, The Old College, Petersfield. Deposit £3 3s. Tenders by Dec. 4.

Wales.—Supply of steel lighting columns, sodium lanterns, traffic bollards and subway lighting, and for all cabling and electrical installation work on the heads of the Valleys Road (section 1, Brynmawr to Abergavenny), for the Ministry of Transport. Applications to Rendel Palmer and Tritton, consulting engineers, 125 Victoria Street, London, S.W.1, by noon, November 21.

INTERNATIONAL CONTRACT

New Zealand.—Design, supply, fabrication, assembly, erection and commissioning of a low pressure gasholder and foundations at the Hastings Gas Works, for the Ministry of Works. The capacity of the gasholder shall be either 100,000 cu. ft. or 150,000 cu. ft. Documents available at the Office of the High Commissioner for New Zealand, 415 Strand, London, W.C.2. Tenders by January 30.

AWARDS

BUILDING AND DECORATING (See also Housing Schemes)

Ashton-under-Lyne, Lancs.—Construction of the third phase of the College of Further Education for Co.E.C.—Shepherd Taylor, Ltd., Blue Bridge Lane, York, £178,403 (recommended).

Aycliffe, Dur.—Factory additions on the Aycliffe trading estate for the Bridgewater Machine Co., Cordingley and McIntyre, architects, Owengrove, Durham City—Edgar Lawson, Ltd., 27 Victoria Road, Darlington. Work commenced.

Ayr.—Reinforcement concrete work for the new grandstand and dressing accommodation at Dam Park sports stadium for B.C.—James Laidlaw and Sons, Ltd., Clydesdale Works, Rutherglen, £13,861.

Battersea.—Erection of 24 additional garages at Mayford Close estate, for B.C.—Direct Labour, £8,742 (recommended).

Battersea.—Improvements to the psychiatric wards at St. John's Hospital for South West Metropolitan Regional Hospital Board—L. and W. Whitehead, Ltd., 169 Clapham Road, London, S.W.9, £23,224.

Beeston and Stapleford, Notts.—Erection of amenity block at sewage farm, Beeston, for U.D.C.—Burrows (Builders), Ltd., 276 Cottenham Road, Ilkeston, Derby., £3,552 (accepted); Hofton and Sons, Ltd., £5,182; H. and E. Loach, Ltd., £5,225; H. Orton and Sons, Ltd., £5,131; W. A. Smedley, £3,995; W. Westerman, Ltd., £5,021.

Belfast.—Superstructure for the erection of an electrical and mechanical engineering building at Queen's University—Cruickshank and Seward architects, Royal London House, 196 Deansgate, Manchester, 3; F. B. McKee and Co., Ltd., 9 Shore Road, Belfast, 15, £1,251,250.

Belmont, Surrey.—Provision of occupational therapy unit at Belmont Hospital for South West Metropolitan Regional Hospital Board—Truett and Steel, Ltd., High Street, Thornton Heath, £52,705 (recommended).

Biggleswade, Beds.—Erection of five garages at Stratton Way for U.D.C.—L. Chambers, Biggleswade, £580.

Birmingham.—Erection of factory for R. Platnauer, Ltd., Tenby Street North—Ronald Lyon Construction, Ltd., Auckland House, New Zealand Avenue, Walton-on-Thames, Surrey. Estimated cost £45,000.

Birmingham.—Following for the Regional Hospital Board: Alterations to Hailey Nurses' Home, St. Margaret's Hospital—P. W. Cox, Ltd., Grove Lane, Birmingham, 21, £28,250; erection of boiler-house at Rubery Hill and Hollymoor Hospital—R. M. Douglas (Contractors), Ltd., 395 George Road, Birmingham, 23, £98,832; reinstatement of accommodation following fire damage at Taylor Memorial Home of Rest—F. C. Price (Builders), Ltd., 100 Gravelly Lane, Birmingham, 23, £3,459; construction of reinforced concrete coal bunker at Summerfield Hospital—C. Green and Sons, Ltd., 132 Monument Road, Birmingham, 16, £4,227; improvements to pathological department and provision of prefabricated building at Marston Green Maternity Hospital—Francis N. Adams, Ltd., 54 Stratford Road, Birmingham, 11, £19,253, and Vic Hallam, Ltd., Nottingham, £3,210, respectively; construction of visitors' waiting room and toilets at Birm-

ingham Skin Hospital—Howard Gough, Ltd., 58 Station Road, Birmingham, 17, £776; medical staff quarters and matron's bungalow at Dudley Road Hospital—W. J. Whittall and Son, Ltd., 132 Lancaster Street, Birmingham, 4, £106,686; provision of animal house and conversion of ward block 6 at Little Bromwich General Hospital—W. Street and Sons, Ltd., 164 Bishop Street, Birmingham, 5, £12,839, and C. Green and Sons, Ltd., £41,984, respectively; adaptations at Empire House, Great Charles Street—W. H. Roberts, 49 Hutton Road, Birmingham, 20, £3,750 (recommended).

Bishop Auckland, Dur.—Erection of the second phase of the fire station for C.C.—A. Lax and Sons, Crook, £31,155.

Bishop Auckland, Dur.—Erection of shops and offices, Newgate Street for H. Foster and Son, and additions to machine shop at Wilson's Foundry—George Stephenson, Ltd., Holdforth Mill, Bishop Auckland.

Bradford, Yorks.—Following for City Council: extensions to the Margaret McMillan Memorial Training College—Pickles Brothers (Builders), Ltd., Halifax, £284,745 (recommended, subject to M.E. approval).

Construction of entrance doors, etc., at James Street Fish Market—Whitaker and Leach, Ashfield Road Works, Thornton, Bradford, £1,147 (recommended).

Bridgnorth, Salop.—Alterations to form X-ray department at Bridgnorth and South Shropshire Infirmary for the Birmingham Regional Hospital Board—S. A. Lowe (Bridgnorth), Ltd., 40 Underhill Street, Bridgnorth, £10,049 (recommended).

Brighton, Sussex.—Improvement of ward 3 at Brighton General Hospital for South East Metropolitan Regional Hospital Board—John W. Ridge, Ltd., 42 Portland Street, Brighton, £20,859 (recommended).

Brighton, Sussex.—Alterations and extensions to the radio-diagnostic unit at Royal Sussex County Hospital for South East Metropolitan Regional Hospital Board—Rice and Son, Ltd., 15 Stockwell Road, London, S.W.9, £20,543 (recommended).

Bristol.—Erection of new offices at Gipsy Patch Lane, Filton, for Bristol Siddeley Engines, Ltd.—Higgs and Hill, Ltd., Crown Works, South Lambeth Road, London, S.W.1. Estimated cost £912,000. Matthews and Son, architects, 91 Gower Street, London, W.C.1, C. E. Ball and Partners, quantity surveyors, 19 St. Stephens Street, Bristol, 1, and A. E. Beer, consulting engineer, 96 St. George's Square, London, S.W.1. Work commenced.

Bromsgrove, Worcs.—Re-flooring at All Saints' Hospital, redecoration of corridor at Barnsley Hall Hospital, and repairs and redecoration of nurses' home at Bromsgrove Cottage Hospital for the Birmingham Regional Hospital Board—Lloyd Birch, Ltd., £1,444; William Weaver, Ltd., 22 Birmingham Road, Bromsgrove, £2,770, and J. and A. Brazier, Ltd., 166 Worcester Road, Bromsgrove, £1,624, respectively (recommended).

Camberwell.—Erection of 10 flats, 12 shops and other ancillary accommodation in Development Area 3 (Acorn Place), for B.C.—Direct Labour (recommended, subject to Ministry approval). Estimated cost £75,194.

Camberwell.—Erection of a nurse training school, ante-natal clinic and recreation hall at St. Giles Hospital for South East Metropolitan Regional Hospital Board—Prestige and Co., Ltd., 149 Grosvenor Road, London, S.W.1, £74,967 (recommended).

Cardiff.—Erection of new headquarters (Snelling House) at Bute Terrace, for Wales Gas Board—William Cowen and Son, Ltd., Penarth Road, Cardiff, T. Alwyn Lloyd and Gordon, architects, 6 Cathedral Road, Cardiff and G. A. Downie and Partners, quantity surveyors, 166 Newport Road, Cardiff.

Chelsea.—Waterproofing of brickwork and repairs to the parapets at Chelsea Manor Buildings, for B.C.—England and Sons, Ltd., 61 Cadogan Lane, London, S.W.1, £745 (recommended); Sibley Bros., £1,111; H. Gibbs and Sons, Ltd., £1,117; H. W. Burgess, Ltd., £1,200; John Garlick (1910), Ltd., £1,300; H. King and Sons (Chelsea), Ltd., £1,307.

Chobham, Surrey.—Provision of an assembly hall and kitchen at Valley End C. of E. Primary School for Co. E.C.—S. Axtell and Son, 4 High Street, Addlestone, £14,948.

Coulsdon, Surrey.—Provision of two hostels at Came Hill Hospital for South West Metropolitan Regional Hospital Board—H. Bacon and Sons, Ltd., 408 Chipstead Valley Road, Coulsdon, £42,125 (recommended).

Crawley, Sussex.—Erection of staff accommodation at Crawley Hospital for South West Metropolitan Regional Hospital

Board—James Longley and Co., Ltd., Crawley, £64,367 (recommended).

Darlington, Dur.—Erection of agricultural repair depot at Merrybent for Teeside Farmers, Ltd., King Street—D. Willoughby, Malpas Road, Northallerton, Yorkshire.

Dartford, Kent.—Improvements to block 3 at Joyce Green Hospital for South East Metropolitan Regional Hospital Board—A. F. Taylor, Ltd., 70 East Hill, Dartford, £21,000 (recommended).

Dartford, Kent.—Erection of a pumping station, road works and ancillary works and demolition of existing buildings at Wilmington pumping station for M.W.B. William F. Blay, Ltd., Dartford, Kent, £48,496 (recommended).

Davidson, Northants.—Erection of new buildings adjacent to existing garages off Tennyson Road, for B.C.—Direct Labour (recommended).

Doncaster, Yorks.—Erection of new administrative block, workmen's baths, messroom, etc., at the works of our operating subsidiary company, Doncaster Coalite, Ltd., at Askern, for Coalite and Chemical Products, Ltd., Oxley and Bussell, architects, 91 Pinstone Street, Sheffield, 1; main contractor—W. Jeffrey (Contractors), Ltd., Sheffield; heating—Brightside Heating and Engineering Co., Ltd., Sheffield; lighting—Arber and Walker, Ltd., Sheffield.

Dorking, Surrey.—Conversion of the geriatric accommodation at Dorking Hospital for South West Metropolitan Regional Hospital Board—Orchard and Browning, Ltd., Old Bury Hill House, Westcott, £13,840 (recommended).

Dundee.—Construction of Hillside Primary School for the E.C.—Charles Gray (Builders), Ltd., 4 Francis Street, Dundee. Work about to commence.

Dunmanway, Cork.—Erection of a factory for Dunmanway Development Association (to be occupied by Tefzel Carpets, Ltd.)—Cahalane Brothers, Dunmanway.

Durham.—Erection of brigade training school at Framwellgate Moor, for C.C.—J. Douglas and Son, Easington Village, £48,856.

Ealing, Middx.—Following tenders for the painting of dwellings at Yeading Green estate, for E.C.: Group 6 (86)—Haymills (Contractor), Ltd., £1,678; Griffin Bros., £2,044; Plackett and Lynn, Ltd., £2,259; E. R. Blackborow, £2,418; L. H. Brown, £2,628; Wembley Construction, £2,852. Group 7 (138)—Haymills (Contractor), Ltd., £2,578; Griffin Bros., £3,050; Plackett and Lynn, Ltd., £3,627; E. R. Blackborow, £4,129; L. H. Brown, £4,186; Wembley Construction, £4,444; W. J. Dickens and Son, Ltd., £4,568.

Eastbourne, Sussex.—Erection of headquarters at the Emmanuel Church site, Hyde Road, for Women's Voluntary Services—Ringmer Building Works, Ltd., Ringmer, Lewes, £18,652. Benz and Williams, 53 Gildredge Road, Eastbourne, are the architects, and Martin and Martin, Hyde Gardens, Eastbourne, are the quantity surveyors for the scheme.

Enniskillen, Fermanagh.—Design, supply, fabrication and erection of structural steelwork, etc., for a factory extension at Enniskillen, for the Ministry of Commerce—Musgrave and Co., Ltd., St. Ann's Works, Belfast, 5.

Exeter.—Fabrication and assembly of timber huts to provide temporary accommodation for traders at Blackboy Road roundabout, stage Va, for City Council—J. Thorn and Sons, Ltd., Brampton Road, Bexleyheath, Kent, £10,015 (recommended).

Greenwich.—Erection of public conveniences at 507-517 Woolwich Road, and eight garages at the rear of 128 Coleraine Road, for B.C.—Direct Labour (recommended). Estimated cost £8,815 and £3,450 respectively.

Greenwich.—Adaptation of 33 Blackwell Lane for use as an industrial training centre, for L.C.C.—J. A. Proctor, Ltd., 163 Burrage Road, London, S.E.18, £11,640 (accepted); John Crisp, Ltd., £11,644; F. H. Beeching and Son (Keston), Ltd., £11,777; T. Cutler and Sons, Ltd., £11,926; Heath Estates (Builders), Ltd., £12,826; J. W. Faulkner and Sons, Ltd., £13,179.

Guildford, Surrey.—Following work at St. Luke's Hospital for South West Metropolitan Regional Hospital Board: ward improvements to the main block—Caesar Bros., Ltd., 8 Victoria Road, Aldershot, £17,333; erection of a radiotherapy unit—C. Neal and Sons, East Lane, West Horsley, £29,921 (both recommended).

Hampstead.—Demolition of the existing roof of hollow brick arches, and supply and fixing of a new arched aluminium roof at Kidderpore service reservoir for M.W.B.—Wallis and Stanley (Civil Engineers), Ltd., 256 Archway Road, London, N.6, £27,488 (recommended).

Harrogate, Yorks.—Erection of motor transport building for B.C.—Wrightson and Robinson, 14 Kirkham Place, Harrogate, £5,387 (recommended).

Huntingdonshire.—Following for E.C.: erection of Sawtry Secondary Modern School—F. B. Thackray and Co., Ltd., St. Peters Hill, Huntingdon, £138,033; New Huntingdon C.P. Junior School—G. B. Brudenell, Ltd., 6 Orchard Way, Cambridge Street, Huntingdon, £92,906.

Inverness-shire.—Erection of new school for handicapped children at Drummond, and two junior secondary schools at Paible, North Bay, North Uist and Lochdar, South Uist, for C.C.—Alexander Hall and Son (Builders), Ltd., Granithill Road, Northfield, Aberdeen, £140,276, £131,547 and £140,282 respectively.

Islington.—Erection of mess hut and store, etc., at Trent Park Cemetery and reconstruction of the urinal at Islington Green, for B.C.—W. Richards and Sons (Hendon), Ltd., Church Road, Hendon, N.W.4, £3,257, and W. T. Ricketts and Sons, Ltd., 73 Southgate Road, London, N.1, £2,745 respectively (recommended).

Kensington.—Interior decorations at the Town Hall, Hornton Cottage, The Red House and Cheniston Lodge, and in the marriage and waiting rooms at Cheniston Lodge for B.C.—W. G. Bulfin, Ltd., 41 Delford Street, London, S.W.6, £571, and J. W. Hanna and Sons, Ltd., 125 Kensington Church Street, London, W.8, £624, respectively (recommended).

King's Lynn, Norfolk.—Maintenance work in conjunction with the modernisation scheme for B.C.: (Contract 1) Renewal of baths and sinks in 22 houses; renewal of baths only in 24 houses; renewal of sinks only in 21 houses; boxing in of existing baths in eight houses; (2) renewal and addition to electrical systems in 90 houses—(1) R. J. Hudson and Sons, 75 Hungate Street, Aylsham, £1,557; (2) Pick and Banham, 11 Whitefriars Road, King's Lynn, £1,069.

Knutsford, Cheshire.—Provision of day rooms and improved sanitary accommodation at Cranford Lodge Hospital for the Manchester Regional Hospital Board—Exors. of Samuel Appleton, Winnington Lane, Northwich, £15,850 and £28,950, respectively (recommended, subject to Ministry approval).

Lambeth.—Repair and improvement of 1 Ashurst Gardens, Tulse Hill for B.C.—W. Hart, Ltd., 72 Blenheim Gardens, London, S.W.2, £977 (recommended).

Lambeth.—Extension and improvement of the Lawn Lane premises of Vauxhall Manor School for L.C.C.—W. J. Marston and Son, Ltd., 1 Stephendale Road, London, S.W.6, £71,140 (accepted); Thomas and Edge, Ltd., £74,321; Y. J. Lovell (London), Ltd., £75,950; The Demolition and Construction Co., Ltd., £77,295; Henry Kent (Builders), Ltd., £80,278; Marshall-Andrew and Co., Ltd., £82,820; Wm. J. Jerram, Ltd., £83,212. The comparable estimate of the appointed architect, Elie Mayoras, is £71,000.

Lancashire.—Building work for provision of boilerhouse (phase II) and installation of steam and condense mains from the Leigh Infirmary to the Atherleigh Hospital for the Manchester Regional Hospital Board—S. Porter, Ltd., Crofters Sawmills, Bolton, £16,982 (recommended, subject to Ministry approval).

Leek, Staffs.—Following at St. Edward's Hospital, Cheddleton, for the Birmingham Regional Hospital Board: (a) Builders' work for provision of fire ring main—H. J. Emery, Ltd., Bedford Works, Sackville Street, Newcastle-under-Lyne, Staffs, £4,697; (b) re-laying corridor floor, (c) removal of rainwater gutters and work to eaves, etc., (d) removal of window bars and glass for re-glazing, (e) re-roofing mortuary, and (f) dry rot removal, etc.—Cousens and Alport, Ltd., Moordale Road, Burston, Stoke-on-Trent, (b) £1,140, (c) £1,711, (d) £1,122, (e) £3,579, and (f) J. A. Bailey and Sons (Builders), Ltd., 25 Tape Street, Cheadle, £2,336 (recommended).

Lewisham.—Erection of a home for old people in the grounds of Ladywell Lodge, for L.C.C.—Allen Fairhead and Sons, Ltd., Enfield, Middx., £172,515 (accepted); Marshall-Andrew and Co., Ltd., £174,337; Y. J. Lovell (London), Ltd., £179,968; Thomas and Edge, Ltd., £183,695; M. J. Gleeson (Contractors), Ltd., £183,946; Wilson Lovatt and Sons, Ltd., £186,101; Rowley Bros., Ltd., £190,153; Kirk and Kirk, Ltd., £192,064.

Lichfield, Staffs.—Builders' work in connection with reorganisation of engineering services associated with modernisation of heating services, phase II, stage I at St. Thomas' Hospital for the Birmingham Regional Hospital Board—Five Oaks Estates, Ltd., Birmingham New Road, Coseley, £59,500 (recommended).

Lisburn, Antrim.—Supply, fabrication, delivery and erection of structural steelwork for Head Post Office, Linehall Street, Lisburn, for Ministry of Finance—Smyth Mills, Ltd., 80 Dunrue Street, Belfast, 3.

London.—Reconstruction of the underground public conveniences at Aldersgate Street, for City Corporation—Trollope and Colls, Ltd., 1 Noble Street, London, E.C.2, £30,338 (recommended); John Mowlem and Co., Ltd., £39,547; Balfour Beatty and Co., Ltd., £34,731; Hall Beddall and Co., Ltd., £33,284; Falkus Bros., Ltd., £32,200; Marshall Andrew and Co., Ltd., £31,638; Holbrook (Builders), Ltd., £31,430.

London.—Erection of showrooms, offices and flats at 11-15 Arlington Street, St. James's, S.W.1, for Kingsmere Investment Co., Ltd. R. Seifert and Partners, architects, 34 Red Lion Square, London, W.C.1—Myton, Ltd., Western House, Western Avenue, London, W.5. Estimated cost £100,000.

Macclesfield, Cheshire.—Provision of new dispensary at Parkside Hospital for Manchester Regional Hospital Board—G. Roylance and Co., Ltd., P.O. Box 5, Waters Green, Macclesfield, £20,897 (recommended, subject to Ministry approval).

Maidstone, Kent.—Erection of county library headquarters, for Co. E.C.—Demolition and Construction Co., Ltd., 3 St. James's Square, London, S.W.1. Estimated cost £229,000.

Maidstone, Kent.—Erection of additional ward accommodation and a twin operating theatre suite at West Kent General Hospital for South West Metropolitan Regional Hospital Board—R. Corben and Son, Ltd., West Borough, Maidstone, £61,467 and £53,122, respectively (recommended).

Middlesex.—Extensions to the wing hangar at London Airport for B.O.A.C. Frederick Snow and Partners, consulting engineers, 144 Southwark Street, London, S.E.1—W. and C. French, Ltd., 50 Epping New Road, Buckhurst Hill, Essex. Estimated cost £1,1m. Work will commence shortly.

Mitcham, Surrey.—Conversion work to ward 5 at Wandsworth Valley Hospital for South West Metropolitan Regional Hospital Board—Thomas E. Earl, 2 Cricket Garden, Mitcham, £7,004 (recommended).

Newcastle upon Tyne.—Four-storey extensions in Low Fair Street, for Crown Wall-paper Stores, Ltd.—R. W. Bell and Co. (Builders), Ltd., Mistletoe Road, Newcastle upon Tyne. Work commenced.

Pembury, Kent.—Construction of a gynaecological unit in block E at Pembury Hospital for South East Metropolitan Regional Hospital Board—G. and F. Penn, Ltd., High Street, Pembury, £19,900 (recommended).

Poplar.—Repairs, improvement and redecoration of Devons Primary School for L.C.C.—Clemens Bros., Ltd., 77 Derby Road, London, E.7, £22,512 (accepted); Hammond and Miles, Ltd., £22,671; O. H. Groves and Co., Ltd., £22,715; S. C. Groves, Ltd., £23,450; Yates (Bow), Ltd., £23,892; R. J. Rowley, Ltd., £24,615; J. W. Falkner and Sons, Ltd., £26,573.

Raunds, Northants.—External painting of 30 houses, Park Avenue, for U.D.C.—C. R. Rice, Finedon, Wellingborough.

Richmond, Surrey.—Repairs to the camp-shedding of the Brentford Aits, two Thames islands between Kew Gardens and Isleworth, for B.C.—John Shelbourne and Co., Ltd., Battlebridge House, Tooley Street, London, S.E.1, £82,893 (recommended).

St. Albans, Herts.—Factory and office block for Belper Rubber Co., Albion Road—Ronald Lyon Construction, Ltd., Auckland House, New Zealand Avenue, Walton-on-Thames, Surrey, £30,000.

St. Marylebone, Middx.—Following for B.C.: Painting of street lighting columns, etc.—T. H. Kenyon and Sons, Ltd., Chancellors Works, Croxley Road, London, W.9 (recommended). Repair of stonework defects at Wellington Road estate—New Stone and Restoration, Ltd., 33 Sloane Street, London, W.1, £1,438; formation of a new entrance from Sholdham Street to the public laundry at the Seymour Place baths—Frederick Mark, Ltd., 36-38 Bell Street, London, N.W.1, £1,513 (recommended).

External redecorations at Hamilton Terrace/Carlton Hill estate—T. H. Kenyon and Sons, Ltd., £1,771.

Shepperton, Middx.—Conversion of a restaurant into two sound stages and ancillary offices and erection of an adjoining office block at Squires Bridge Road, for Shepperton Studios, Ltd.—Howard Farrow, Ltd., Golders Green Road, London, N.W.11. Oscar Garry and Partners, architects, 66 Gloucester Place, London, W.1; Bylander,

Waddell and Partners, consulting engineers, 169 Wembley Park Drive, Wembley, Middx.; Stanley Griffith and Partners, quantity surveyors, Greycoat Chambers, 29 Greycoat Street, London, S.W.1.

Skelmersdale, Lancs. — Repairs and improvements to Town Hall for U.D.C. J. L. Mather, architect—H. Tonge, Spencers Lane, Up Holland, £12,000.

Stafford. — Following for the Birmingham Regional Hospital Board: Provision of stores under new operating theatres at Staffordshire General Infirmary—H. Wood and Son, 39 Oulton Road, Stone, £3,948; improvements to male 7 ward, and exterior painting at St. George's Hospital—V. Silvester and Sons, Ltd., Stafford, £1,771, and Seddon (Stoke), Ltd., 55 Duke Street, Fenton, Stoke-on-Trent, £3,964, respectively (recommended).

Stoke Newington. — External redecoration of Londesborough House, Knebworth House, Orde House, Deepdene House, Ferndale House, Oakdene House, Briardale House, Thorndale House, Rosedale House, Chindit House and Wingate House, for B.C.—Joseph O'Dea, 7 Milton Road, London, N.6. £3,795 (recommended).

Stoke-on-Trent, Staffs. — Following for the Birmingham Regional Hospital Board: provision of accident unit, ward block and operating theatre suite at North Staffordshire Royal Infirmary—Seddon (Stoke), Ltd., 55 Duke Street, Fenton, Stoke-on-Trent, £308,745; geological investigation for provision of maternity unit and nursing staff accommodation at City General Hospital—R. M. Douglas (Contractors), Ltd., 395 George Road, Birmingham, 23, £4,739; retiling of Birch Villa, Stallington Hall—J. Robinson (Burton-on-Trent), Ltd., Bond End Building, Burton-on-Trent, £1,058; covering flat roofs with aluminium alloy at Groundsloft Hospital—Horace Poole, Ltd., Newcastle Road, Stone, £3,956 (recommended).

Stourbridge, Worcs. — Provision of (a) outpatients' department and (b) building to house water-softening plant, etc., at Corbett Hospital for the Birmingham Regional Hospital Board—(a) J. Hickman (Brierley Hill), Ltd., Brockmoor, Brierley Hill, Staffs., £349,786, and (b) A. H. Guest, Ltd., Coalbourne Brook, Stourbridge, £5,702 (recommended).

Stretford, Lancs. — Following for B.C.; replacement of Greenhouses, Longford Park—R. Halliday and Co., Ltd., Middleton, £6,666; conversion of 79 Kenwood Road into two self-contained dwellings—J. and H. Roger, 2 Bannister Street, Stretford, £1,450 (recommended).

Sutton Coldfield, War. — Building work for incinerator, road works and lighting work at Good Hope Hospital, for the Birmingham Regional Hospital Board—T. Lowe and Sons, Ltd., Curzon Street, Burton-on-Trent, £23,925 (recommended).

Tynemouth, Northumb. — Erection of a school for educationally subnormal children, for B.C.—A. R. Robertson, Ltd., East Park View, Blyth (provisionally accepted); J. Smeds, architect, 56a Camden Street, North Shields and J. Glover, quantity surveyor, 13 Winchester Street, South Shields.

Warwick. — Provision of partitioning to provide cubicle accommodation and improvements and redecorations to Agnes Jones Ward at Central Hospital, Hatton, for the Birmingham Regional Hospital Board—T. Nicholson (Leamington), Ltd., 24 Regent Street, Leamington Spa, £892 and £3,430 respectively (recommended).

Wellington, Salop. — Builders work in connection with improvements to water supply at Wrexham Hospital, for the Birmingham Regional Hospital Board—G. Linnecor and Son, Ltd., New Town Row, Birmingham, 6, £2,117 (recommended).

Westbury, Wilts. — Building and civil engineering work in connection with new cement works, for Associated Portland Cement Manufacturers—A. E. Farr, Ltd., Station Road, Westbury.

Willesden, Middx. — Following for B.C.; Repairs and adaptations at 14 Chichester Road—E. A. Birch, 4 Compton Road, London, N.W.10, £1,262; roof trusses for blocks B, C, D and E, at Willesden Lane Redevelopment—Rainham Timber Co., Ltd., £1,241 (recommended).

Wolverhampton, Staffs. — Following for the Birmingham Regional Hospital Board: construction of operating theatres at Royal Hospital—Wilson Lovatt and Sons, Ltd., Clarence Street, Wolverhampton, £152,013; building work associated with provision of stand-by package boiler and water treatment plant and provision of offices for nursing administrative staff at New Cross Hospital—A. M. Griffiths and Son, Ltd., Thomas Street, Wolverhampton, £3,172 and £4,530

respectively; provision of prefabricated building and erection of same as extension to pathological laboratory at New Cross Hospital—Panel-Lastic Construction Co., Ltd., Belvedere Works, Railways Terrace, Feltham, Middx., £3,708 and W. Gough and Sons, Ltd., 129 Horseley Field, Wolverhampton, £6,985 respectively (recommended).

Wood Green, Middx. — Modernisation of the Refuse Destructor Plant, for B.C.—Heenan and Froude, Ltd., 30 St. James Square, London, S.W.1. £24,390 (recommended, subject to Ministry approval).

Worcester. — Following for the Birmingham Regional Hospital Board: building work in association with new main electricity distribution system and ventilation in operating theatre, Ronkswood Hospital—T. Oliver (Builder), Ltd., St. Martins Works, James Street, Worcester, £681 and J. Wood and Sons (Worcester), Ltd., Gregory's Mill Street, Worcester, £1,914 respectively; builders work for improvement to cold water storage facilities at Newtown Hospital, electric distribution main and fire pump at Powick Hospital—T. Oliver (Builder), Ltd., £2,277, £2,791 and £2,500 respectively; provision of sanitary annexes to wards M1 and M2 and metal windows and suspended floors for staff accommodation at Powick Hospital—George Harrison and Sons (Builders), Ltd., 130 Worcester Road, Droitwich, £18,219, Henry Hope and Sons, Ltd., Halford Works, Smethwick, £976 and Kleine Co., Ltd., 191 Corporation Street, Birmingham, £3,138 respectively (recommended).

CLOTHING AND TEXTILES

Fulham. — Supply of protective footwear, for B.C.—Co-operative Wholesale Society, Ltd., 99 Leman Street, London, E.1, and Joseph Miller and Sons, Ltd., 228 Borough High Street, London, S.E.1, £421 (recommended).

DEMOLITION

Camberwell. — Demolition of following, for B.C.: Vacant properties in Development Area 6 (Asylum Road)—W. S. Wright, Ltd., Salisbury Road, Bromley, Kent, £1,695; 10 to 36 Lettsom Street and 1 and 2 Fowler Street in Development Area 8 (Lettsom Street)—A. J. Miles, 22A Weendale Road, London, S.E.13, £849; Grange Lodge and Hillcrest Lodge, Sunray Avenue—Gorst and Co., Ltd., 33 Floyd Road, Charlton, London, S.E.7, £317 (recommended, subject to Ministry approval).

Hammersmith. — Demolition of following, for B.C.: 1-17 St. Ann's Road—Leonard Perlins, Ltd., 45 Mount Pleasant Road, London, N.W.10, £313 (accepted); Southern Demolition Co., Ltd., £689; Geo. E. Cloke, Ltd., £760.

1 Scots Road, 30-40 Southbrook Street and 3 and 4 Devonshire Villas—Leonard Perlins, Ltd., £373 (recommended); Southern Demolition Co., Ltd., £680; Gowing and Pursey, Ltd., £750.

London. — Demolition and site clearance works at following for City Corporation: Land bounded by Foster Lane, Cheapside and Empire House, St. Martin's-le-Grand, redevelopment unit 37—Demolition and Construction Co., Ltd., 3 St. James's Square, London, S.W.1, £12,041 (recommended); Charles Griffiths, Ltd., £24,526; Willment Bros., Ltd., £22,243; Goodman Price, Ltd., £17,226; Sir Robert McAlpine and Sons, Ltd., £14,415.

72 Lower Thames Street and 13 Harp Lane, part of redevelopment unit 7—Willment Bros., Ltd., Baltic Wharf, Waterloo Bridge, London, S.E.1, £4,836 (recommended); Charles Griffiths, Ltd., £9,261; Demolition and Construction Co., Ltd., £6,880; Sir Robert McAlpine and Sons, Ltd., £5,671; Goodman Price, Ltd., £5,455.

Ramsgate, Kent. — Dismantling and removal of the swing bridges over the Western dock gates at the Royal Harbour, for B.C. H. Spenceley Hole, borough engineer and surveyor—Brown and Mason, Ltd., Margate, to pay Corporation £110.

Stretford, Lancs. — Demolition of 1016/1022 Chester Road, for B.C.—J. Watkinson, Gates Farm, Sandy Lane, Stretford, £300 (recommended).

ELECTRICAL

Birmingham. — Electrical services for the following works for the Regional Hospital Board: alteration to Hailey Nurses' Home, St. Margaret's Hospital—W. H. Taylor (Wolverhampton), Ltd., Heanton House, Salop Street, Wolverhampton, £3,253; rehabilitation unit at Rubery Hill and Hollymoor Hospital—Syd Davis (West Bromwich), Ltd., 45 High Street, West Bromwich, £24,872; outpatients department at Selly Oak Hospital—Electrical

Installations, Ltd., 218 Highgate Road, Birmingham, 12, £19,219; lift and book hoist at Selly Oak Hospital—Keighley Lifts, Ltd., 24 Livery Street, Birmingham, 3, £6,347; pathological department at Marston Green Maternity Hospital—Sid Dagnall and Son, Ltd., 2 Fulham Road, Birmingham, 11, £1,639; conversion of ward block six, provision of animal house and alterations and extensions to pathological department at Little Bromwich General Hospital—National Electric and Engineering Co. (Birmingham), Ltd., Poplar Road, Dorridge, Knowle, £4,355, Stuart Electrical Co., Ltd., 92 Cheapside, Birmingham, 5, £662 and Lee Beesley and Co. (Birmingham), Ltd., Bath Row, Birmingham, 15, £3,604 respectively; adaptations at Empire House, Gt. Charles Street—Eta Lighting and Heating Co., Ltd., 293a Broad Street, Birmingham, 1, £1,523 (recommended).

Bridgnorth, Salop. — Electrical services for X-ray department at Bridgnorth and South Shropshire Infirmary for Birmingham Regional Hospital Board—J. T. Jarvis and Son, Ltd., 18 Rosemary Avenue, Goldthorpe Park, Wolverhampton, £1,152 (recommended).

Coventry. — Electrical services for dental department and hospital administrative offices at Coventry and Warwickshire Hospital for the Birmingham Regional Hospital Board—G. R. Marson, Ltd., 110 Queen Victoria Street, Coventry, £1,209, and H. Pratt, Ltd., Potter Lane, Birmingham, 6, £1,808, respectively (recommended).

Huddersfield, Yorks. — Supply of approximately 790 lin. yd. of tubular guard rails for B.C. A. L. Percy, borough engineer and surveyor—The Quayside Engineering Co., Ltd., Brougham Street, Stockton-on-Tees.

Kensington. — Provision of fencing at Barby Road, St. Quintin estate, for B.C.—T. W. Palmer and Co. (Merton Abbey), Ltd., 371 Church Road, London, S.W.19 (recommended).

Kingston-upon-Thames, Surrey. — Supply of equipment for the installation of traffic signals at the junction of London Road and Camberwell Road, for B.C.—Automatic Telephone and Electric Co., Ltd., Strowger House, 8 Arundel Street, London, W.C.2, £2,274 (recommended).

Oswestry, Salop. — Electrical services for rebuilding of Ercall Ward at Robert Jones and Agnes Hunt Orthopaedic Hospital, for the Birmingham Regional Hospital Board—G. H. Smallwood and Co., Ltd., 15 College Hill, Shrewsbury, £4,221 (recommended).

St. Marylebone. — Modification of 11 lift gates, for B.C.—Newbury and Thomas, Ltd., 21 Wagner Street, London, S.E.15, £1,443.

Scunthorpe, Lincs. — Electricity services at the Crematorium for B.C.—Yorkshire Electricity Board, £1,215 (recommended).

Shrewsbury, Salop. — Electrical services for the nurses' home and training school at Shelton Hospital for the Birmingham Regional Hospital Board—Midlands Electricity Board, £7,209 (recommended).

Stourbridge, Worcs. — Electrical services at Corbett Hospital for the Birmingham Regional Hospital Board—C. A. and W. A. Postings, Union Street, Wolverhampton, £18,970 (recommended).

Willesden, Middx. — Electrical installations for blocks B, C, D and E, at Willesden Lane Redevelopment and the new office block, for B.C.—Phoenix Electrical Co. (London), Ltd., 16 Marshalsea Road, London, S.E.1, £9,526, and F. C. Ward and Son (Electrical), Ltd., 261 King Street, London, W.6, £14,198 respectively.

Wolverhampton, Staffs. — Electrical services for new operating theatres at the Royal Hospital and temporary extension to pathological laboratory at New Cross Hospital for the Birmingham Regional Hospital Board—C. A. and W. J. Postings, Union Street, Wolverhampton, £17,831, and Burns and Dugdon, Ltd., 33 St. Johns Street, Wolverhampton, £826, respectively (recommended).

Wolverhampton, Staffs. — Electrical services for conversion of photographic department at Royal Hospital, for the Birmingham Regional Hospital Board—Birch, Evans and Jellings, Ltd., 242 Stafford Street, Walsall, £1,353 (recommended).

FENCING

Battersea. — Completion of concrete fencing works at Mayford Close estate, for B.C.—Metropolitan Concrete Works, Ltd., £817 (recommended).

Staffordshire. — Snow fencing on county roads for C.C.—F. J. Massey (Timber), Ltd., Brooklands, Melton Road, Queniborough, Leicester.

Stretford, Lancs. — Fencing Gorse Hill site for B.C.—Darlington Fencing Co., Ltd., Carr Hill, Doncaster, £551.

GAS AND WATER SUPPLY

Croydon, Surrey.—Repairs to the puddle clay surrounding the outer walls of Norwood water service reservoir for M.W.B.—J. B. Edwards and Co. (Whyteleafe), Ltd., Kenley Lane, Kenley, £4,748.

Duncannon, Tyrone.—Erection of district reservoirs for R.D.C.—H. and D. Gray, Portadown, £28,895.

Exeter.—Following for City Council: Supply of a 200-h.p. high lift pump for Pynes waterworks—Sulzer Bros. Ltd., 31 Bedford Square, London, W.C.1, £3,484; duplicate pump sets required for pumping installation at Marypole Head reservoir—Lee, Howl and Co., Ltd., Tipton, Staffs., £1,338 (recommended).

Scarborough, Yorks.—Supply of pipes and fittings for certain mainlaying works for B.C.: 3,000yd.—Turner Asbestos Cement Co., Ashburton Road, Manchester, 17, £2,714; 1,800yd.—Stanton and Staveley Sales, Ltd., Nottingham, £4,494 (recommended).

Scunthorpe, Lincs.—Gas services at the crematorium for B.C.—East Midland Gas Board, £1,211 (recommended).

Southend-on-Sea, Essex.—Supply of pumping plant, for Southend Waterworks Company. Binnie, Deacon and Gourley, consulting engineers, Artillery House, Artillery Row, London, S.W.1.—W. H. Allen Sons and Co., Ltd., Queens Engineering Works, Bedford. Estimated cost £141,000.

Walthamstow, Essex.—Cleaning out and levelling the floor of Racecourse reservoir for M.W.B.—W. and C. French, Ltd., Buckhurst Hill, Essex, £39,743 (recommended).

Willesden, Middx.—Gas services for Blocks B, C, D and E, at Willesden Lane Redevelopment, for B.C.—North Thames Gas Board, £1,370.

Wolverhampton, Staffs.—Replacement of water softening plant at Royal Hospital, for the Birmingham Regional Hospital Board—John Thompson (Kennicott), Ltd., £1,654 (recommended).

HARBOURS, PIERS AND SEA DEFENCE WORKS

Bexhill-on-Sea, Sussex.—Following for the replacement of two groynes at Beaulieu Road, for B.C.: supply of timber—E. and G. Eade, Iping, Midhurst, £1,687; construction work—Direct Labour.

Jarrow-on-Tyne, Dur.—Extension to jetty at the Jarrow oil installation of Shell Mex and B.P. Ltd.—Sir R. McAlpine and Sons, Ltd., 81 Jesmond Road, Newcastle upon Tyne, £250,000.

Montrose, Angus.—Repairs to wet dock for the Harbour Board—Yorkshire Hennebique Contracting Co., Ltd., 123 The Mount, York, £32,445. Work about to commence.

HEATING AND VENTILATING

Birmingham.—Mechanical services for the following works for the Regional Hospital Board: alterations to Hailey Nurses' Home, St. Margarets Hospital—Saunders and Taylor, Ltd., 23 Hall Street, Birmingham, 18, £10,425; provision of rehabilitation unit at Rubery Hill and Hollymoor Hospital—David F. Wiseman and Son, Ltd., 145 Conybene Street, Birmingham, 12, £31,879; outpatients' department at Selly Oak Hospital—Richard Crittall and Co., Ltd., 42 Gooch Street, Birmingham, 5, £50,287; pathological department at Marston Green Maternity Hospital—H. Clark and Son, Ltd., 656a Allesley Old Road, Coventry, £6,535; casualty department, animal house and pathological department at Little Bromwich General Hospital—Steels Engineering Installations, Ltd., 172 St. Pauls Road, Birmingham, 12, £11,193 and £1,751 and Hopes Heating and Engineering, Ltd., Halford Works, Smethwick, £6,192 respectively (recommended).

Bridgnorth, Salop.—Electrical services for X-ray department at Bridgnorth and South Shropshire Infirmary for the Birmingham Regional Hospital Board—A. L. Hughes (Heating Engineers), Ltd., 75 North Street, Wolverhampton, £3,546 (recommended).

Chobham, Surrey.—Provision of heating and hot water supply at the County Infants' School for Co. E.C.—Falcon Works (Guildford), Ltd., Falcon Road, Guildford, £2,478.

Coventry.—Mechanical services for dental department and hospital administrative offices at Coventry and Warwickshire Hospital for the Birmingham Regional Hospital Board—A. T. Ormerod, 23 George Eliot Road, Coventry, £3,672 and £1,286, respectively (recommended).

Dartford, Kent.—Installation of new boilers, oil firing, etc., at the Bow Arrow Hospital for South East Metropolitan Regional Hospital Board—Clark, Hunt and Co., 318 Southbury Road, Enfield, Middx., £17,649 (recommended).

Hartlepool, Dur.—Installation of boiler plant at Hartlepool Hospital for Newcastle upon Tyne Hospital Board—Selborne Engineering Co., Ltd., Jesmond, Newcastle upon Tyne, £13,422.

Lancashire.—Boiler and ancillary equipment and connection to Atherleigh Hospital, and coal and ash handling plant at the Leigh Infirmary and Atherleigh Hospital for the

Manchester Regional Hospital Board—J. Mercer, Ltd., Tulketh Hall Works, Hesketh Street, Preston, £41,748, and J. Proctor, Ltd., Hammerton Street, Burnley, £9,430 (recommended, subject to Ministry approval).

Lichfield, Staffs.—Reorganisation of engineering services, phase I, stage II and replacement of coldrooms at St. Matthew's Hospital, Burntwood, for the Birmingham Regional Hospital Board—Richard Crittall and Co., Ltd., 42 Gooch Street, Birmingham, 5, £114,400 and W. J. Furse and Co., Ltd., Traffic Street, Nottingham, £1,845 respectively (recommended).

Oswestry, Salop.—Mechanical services for rebuilding of Ercall Ward at Robert Jones and Agnes Hunt Orthopaedic Hospital, for the Birmingham Regional Hospital Board—Ducatt Heating Co., Ltd., Platts Crescent, Amblecote, Stourbridge, £9,956 (recommended).

Shrewsbury, Salop.—Mechanical services for nurses' home and training school, Shelton Hospital and extensions to isolation block and adaptations to wards 1 and 3, Copthorne Hospital for the Birmingham Regional Hospital Board—Ducatt Heating Co., Ltd., Platts Crescent, Amblecote, Stourbridge, £16,959 and £7,815, respectively (recommended).

Sligo, Eire.—Supply of hot water installations to County Home for C.C.—M. Leonard, Sligo, £1,600.

Stoke-on-Trent, Staffs.—Mechanical services for accident unit, ward block and operating theatre suite at North Staffordshire Royal Infirmary, for the Birmingham Regional Hospital Board—Truswell and Son, Ltd., Caloric Works, Vessey Street, Newcastle, Staffs., £101,296 (recommended).

Stourbridge, Worcs.—Mechanical services for main boiler-house and out-patients' department and improvements to cold water supply at Corbett Hospital for the Birmingham Regional Hospital Board—G. N. Haden and Sons, Ltd., 24 St. Pauls Square, Birmingham, £22,731; Edgar Toon, Ltd., Bath House, Mountrath Street, Walsall, £43,620 and Ducatt Heating Co., Ltd., Platts Crescent, Amblecote, Stourbridge, £2,318, respectively (recommended).

Sutton and Cheam, Surrey.—Installation of a boiler and piping work in the greenhouse at Nonsuch Park for B.C.—S. Leach (Heating Engineers), Ltd., £1,378 (recommended).

Warwick.—Provision of coal handling plant for renewal of engineering services at Central Hospital, Hatton, for the Birming-

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ham Regional Hospital Board—James Proctor, Ltd., £5,382 (recommended). **Wolverhampton, Staffs.**—Pipework associated with water treatment plant at New Cross Hospital, for the Birmingham Regional Hospital Board—Norris Warming Co., Ltd., 62 Lionel Street, Birmingham, 3, £1,083 (recommended).

Wolverhampton, Staffs.—Mechanical services for new operating theatres at Royal Hospital and temporary extension to pathological laboratory at New Cross Hospital for the Birmingham Regional Hospital Board—Seymour Sweet and Co., Ltd., 19 Rea Street South, Birmingham, 5, £52,940, and A. G. Curtis and Son, Ltd., Pearson Street, Wolverhampton, £989, respectively (recommended).

Worcester.—Engineering services for improvements to cold water storage facilities at Newtown Hospital, for the Birmingham Regional Hospital Board—David F. Wiseman and Son, Ltd., Wolverhampton, £6,175 (recommended).

HOUSING SCHEMES

Bagshot, Surrey.—Twenty-six Homeville traditional houses and bungalows at Meadow Way, for R.D.C.—J. S. Evans and Son, Maidenhead, Berks.

Ballymoney, Antrim.—Thirty-two houses at Townparks for R.D.C.—W. and J. Taggart, Ltd., Glenmanus House, Portrush, £79,773 (subject to Ministry approval).

Battersea.—Erection of superstructure, etc., for 72 dwellings at Knox Road, stage II, for B.C.—Direct Labour, £203,416 (recommended).

Bermondsey.—Fifty-four dwellings and garages, etc., as the completion of the Bush Road site, blocks B and C, for B.C.—Direct Labour, £172,818 (recommended).

Billesdon, Leics.—Six one-bedroom flats at Tilton-on-the-Hill, for R.D.C. John W. Stephenson, engineer and surveyor—Hardsbattle and Son (Builders), Ltd., 55 Barkby Road, Leicester, £9,140. Work commencing shortly.

Bilston, Staffs.—Eighty-four houses, 10 bungalows and 57 housing units at Bull Lane and 100 houses, 10 bungalows and eight housing units at Bradley Lane South, Rocket Pool, for B.C.—Five Oaks Estates, Ltd., Birmingham New Road, Coseley, £294,548, and £242,647, respectively.

Camberwell.—Twenty-one dwellings at permanent housing site 139 (Maxted Road/Howden Street), for B.C.—Direct Labour, £45,632.

Castleragh, Down.—Two bungalows and ancillary works at Rosewood Park for R.D.C. O. N. Wheeler, architect, 9, Donegall Square South, Belfast—McCormick and Gillen, 1 Wynchurh Walk, Belfast, £3,632 (accepted); Martin and Waddell, £3,659; Evans and Brown, £3,678; G. Seawright, £4,441. Work commencing November.

Easington, Dur.—Erection of four special purpose bungalows at Murton for the R.D.C.—O. P. Docherty and Son, Hylton Road, Sunderland, £6,968.

Edmonton, Middx.—Metal balustrading for block C at the Snell Park Redevelopment, N.18, for B.C.—Booth and Driver, Ltd., 16 Oakleigh Road North, London, N.20, £2,632.

Farnworth, Lancs.—One hundred and ninety dwellings on Pledder Lane South No. 2 site for B.C.—W. Lionel Gray (1933), Ltd., Hospital Buildings, Darley, Farnworth, £312,379 (recommended, subject to Ministry approval).

Grangemouth, Stirlings.—Ninety-nine houses at Grangemouth, in connection with the airfield 5th development, for the B.C. Philip S. Cocker, architect, 66 Lumley Street—Wight Construction, Ltd., Earls Gate Works, Grangemouth, £211,625.

Hainault, Essex.—Twenty-seven houses and 12 flats, eight tenants' stores, 70 garages and an area depot store at Hainault estate for L.C.C.—Direct Labour. Estimated cost £96,905.

Islington.—Following for B.C.: Twenty-two dwellings in a four-storey block at the 344-346 Camden Road scheme—Rowley Bros, Ltd., Tower Works, Dunloe Avenue, London, N.17, £56,297 (recommended, subject to Ministry approval); Pitchers, Ltd. £56,886; Patman and Fotheringham, Ltd. £57,598; A. S. Fairhead and Sons, Ltd. £57,901; W. J. Simms, Sons and Cooke, Ltd. £58,056; Walter Lilly and Co., Ltd. £59,057. Six dwellings at 309-313 Liverpool Road—Herbert Richardson and Sons, Ltd., 59 Mount Pleasant, London, W.C.1, £16,377 (recommended negotiated tender, subject to Ministry approval).

Kensington.—Conversion of 109 Oxford Gardens into 10 bed-sitting-room flats for old people for B.C.—Bisham (Builders), Ltd., £4,350 (recommended, subject to Ministry approval).

King's Lynn, Norfolk.—Following for B.C.: 120 houses at Tarren site, North Lynn, and 32 at Sadler's Close, Seabank estate—Law Bros., (Builders), Ltd., City Road, Littleport, Ely, Cambs., estimated cost £254,789; 42 dwellings at Oak Circle—A. K. Wagg and Co., Pullover Road, Tilney All Saints, King's Lynn, £66,047.

Letterkenny, Donegal, Eire.—Thirty-seven houses and development of sites at Ballyboe/Glencair, together with development and other incidental works, for U.D.C. Charles V. McLaughlin, architect, Letterkenny—J. W. Cunningham, Main St. Carrick, Co. Donegal, £59,995.

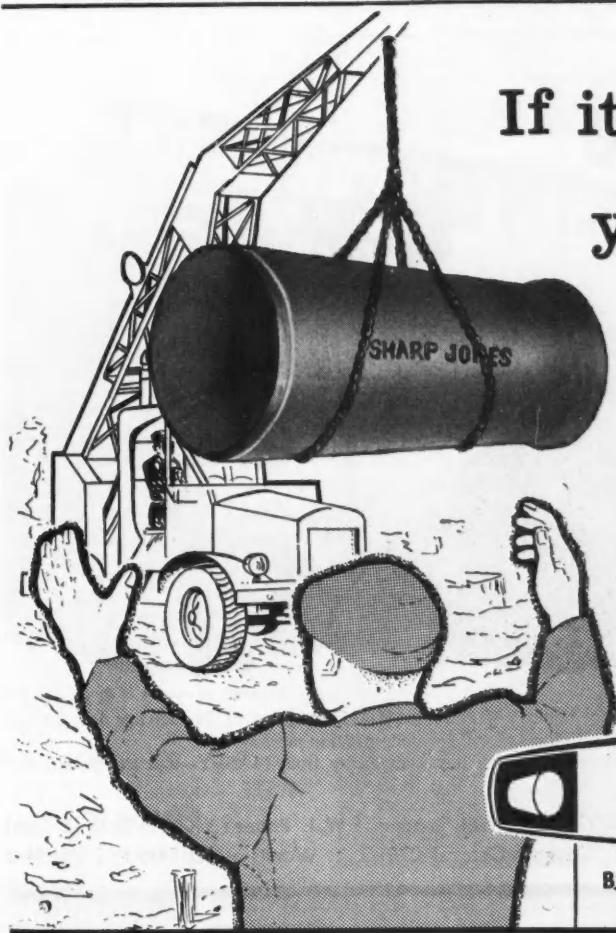
Lewisham.—Erection of 224 flats, 28 maisonettes, four houses, 56 garages, a highways maintenance depot and a housing maintenance depot, as the second stage of the Porthcawl Road permanent housing scheme, for B.C.—Griggs and Son, Ltd., 56 Victoria Street, London, S.W.1, £858,518 (recommended, subject to Ministry approval); Wates, Ltd., £867,641; Rush and Tompkins, Ltd., £870,244; Wm. Willett (Contractors), Ltd., £883,273; M. J. Gleeson (Contractors), Ltd., £888,613; Y. J. Lovell (London), Ltd., £888,622; A. Fairhead and Sons, Ltd., £900,112; Kirk and Kirk, Ltd., £906,322; Wilson Lovatt and Sons, Ltd. £915,263; Leslie and Co., Ltd., £917,073; Rowley Bros., Ltd., £923,081; W. J. Simms, Sons and Cooke, Ltd., £928,228.

Littlehampton, Sussex.—Twenty-four flats and 18 garages in the 1961 programme, for U.D.C.—Gregory (Housing), Ltd., 21 Farncombe Road, Worthing, £39,215.

Mere and Tisbury, Wilts.—Four Homeville traditional bungalows at The Old Hollow, Mere, for R.D.C.—A. Hammond and Sons, Ltd., Sturminster Newton, Dorset.

Newbury, Berks.—Eight old people's bungalows at Gloucester Road and one block of four two-bedroom flats, six garages and eight external stores at 106 Craven Road, for B.C.—Hoskins and Pond, Ltd., West Mills, Newbury, £10,761, and F. D. Carter and Partners, Up Green, Inkpen, £8,087 respectively (recommended).

Northern Ireland.—Following for Housing Trust: 89 dwellings and 15 garages,



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together with ancillary and engineering works at Newcastle (3) for Housing Trust—Dorman Bros., Castlewellan Road, Newcastle, Co. Down.

Two hundred and sixty-seven dwellings and 42 garages, together with ancillary and engineering works at Suffolk (Hillhead), second development—Unit Construction Co., Ltd., Church View, Holywood.

Richmond, Surrey.—Thirteen one-bedroom bungalows on land off Thompson Avenue, for B.C.—C. A. S. (Contractors), Ltd., St. James' House, Kensington Square, London, W.8, £33,277. Work to commence January.

St. Marylebone.—Twenty-nine old people's flats at the Beaumont Street site, for B.C.—Greggs and Son, Ltd., 56 Victoria Street, London, S.W.1, £66,452 (recommended, subject to reductions).

Stoke Newington.—Eight houses, three flats and one bed-sitting-room flat at 1A Fairholme Road housing site, for B.C.—Robert Hart and Sons, Ltd., 121 Victoria Street, London, S.W.1, £38,307 (recommended, subject to Ministry approval).

Sutton and Cheam, Surrey.—Sixteen flats and eight flatlets at St. Nicholas Rectory site, West Street, for B.C.—Uden and Co. (Epsom), Ltd., 53 South Street, Epsom, £34,524 (recommended, subject to Ministry approval).

MATERIALS AND SUPPLIES

Wolverhampton, Staffs.—Provision of aluminium windows for new operating theatres at Royal Hospital for the Birmingham Regional Hospital Board—James Gibbons, Ltd., £6,292 (recommended).

MISCELLANEOUS

Sutton Coldfield, War.—Installation of incinerator plant at Good Hope Hospital, for the Birmingham Regional Hospital Board—Heenan and Froude, Ltd., Worcester, £1,935 (recommended).

PLANT AND MECHANICAL TRANSPORT

Eastbourne, Sussex.—Supply of a combine harvester for Cornish Farm for B.C.—Harper and Eede, Ltd., 44 Cliffe High Street, Lewes, £1,560 (recommended); E. O. Culverwell, Ltd., £1,639; Curtis and Co., £1,644.

Islington.—Supply of 40 Paladin circular refuse collection containers fitted with special brackets and castor wheels for installation in new blocks of flats and other premises, and 34 containers for 17 of the pedestrian controlled electric vehicles employed in the street sweeping service, for B.C.—Walker and County Cars, Ltd., Fleet, Hants, £934, and Abacus Municipal, Ltd., Sutton-in-Ashfield, Notts, £743 respectively (recommended).

Kensington.—Supply of the following for B.C.: 12 petrol Karrier motive units, six electric motive units, one cartage body and four cartage tippers—Rootes, Ltd., Devonshire House, Piccadilly, London, W.1, £11,443, £10,854, £555 and £4,354, respectively; 10 barrier loaders and 15 moving floor bodies—Glover, Webb and Liveridge, Ltd., 561 Old Kent Road, London, S.E.1, £15,230 and £23,152, respectively.

Rushden, Northants.—Supply of a 3-ton lorry for U.D.C.—Croyland Motors, Ltd., Oxford Street, Wellingborough, £1,201.

RAILWAY ENGINEERING

British Railways.—Following contracts placed:

Western Region:

Provision of timber piling to provide temporary support to a trimmer girder of warehouse I due to collapse of the dock wall at Brentford Docks—John Howard and Co., Ltd., Howard House, Buckingham Gate, London, S.W.1.

Renewal of roof covering, glazing and walkways at Canton carriage sheds and diesel maintenance depot, Cardiff—J. Rata and Co., Ltd., Chapter Road, Willesden, London, N.W.2.

Brush painting the passenger stations, goods shed, miscellaneous buildings, locomotive sheds and signal box, etc., at Aberystwyth and Borth—Arundel Painting Contractors, Ltd., Edward Street, Louth, Lincs.

Brush painting the passenger station and goods depot, Llandrindod Wells—Gilmours (Manchester), Ltd., Higher Road, Urmston, Manchester.

Partial renewal of the abutments to Hope Road underbridge, Dinnor, near Hereford—Fairwater Construction, Ltd., Fairways Crescent, Fairwater, Cardiff, Glam.

Carrying out general brickwork repairs to nine bridges on the High Wycombe to

Princes Risborough line—Aubrey Watson, Ltd., Quebec Road, Henley-on-Thames, Oxon.

Provision and installation of an automatic telephone exchange at Plymouth Station—The Reliance Telephone Co., Ltd., Lawford Street, Bristol, 2.

ROADS, BRIDGES AND SITE WORKS

Argyllshire.—Completion of the remaining work on the reconstruction of the Tarbert-Redhouse section of the Lochgilphead-Campbeltown road, for C.C.—R. J. McLeod (Contractors), Ltd., 22 Lynedoch Street, Glasgow, C.3, £190,573.

Birmingham.—Road repairs, etc., at Highcroft Hospital and resurfacing of roads and pathways at Coleshill Hall Hospital, for the Regional Hospital Board—Cofield Contractors, Ltd., £1,048 and John Hadfield and Sons, Ltd., Birmingham, £2,719 respectively (recommended).

Boldon, Dur.—Construction of roads and sewers to serve 68 houses to be built at West Boldon by the U.D.C.—J. T. Edmondson, surveyor—Direct Labour.

Caterham and Warlingham, Surrey.—Construction of a footway and small parking area at The Crescent, Woldingham, for U.D.C.—Rucobon, Ltd., 33 Winchester Road, Northwood, Middx, £1,585 (accepted); Kaymat, Ltd., £1,659; Farnborough Construction Co., Ltd., £1,808; Mears Bros. (Contractors), Ltd., £1,980; Waywarden, Ltd., £2,171; T. Vickers Ltd., £2,543. Work about to commence.

Colne, Lancs.—Surface dressing of various roads for B.C.—S. Sutcliffe and Son, Ltd., Myholmroyd (recommended).

Edinburgh.—Reconstruction of Peffermill Road and Niddrie Mains Road for City Council—George Wimpey and Co., Barnton Grove, Edinburgh, 4, £135,000.

Hammersmith.—Special footway works at four roads during 1961-62, for B.C.—London Paving Co., Ltd., 21 Aylmer Parade, London, N.2, £3,527 (recommended).

Hazelgrove and Bramhall, Cheshire.—Approximately 1,300 sq. yd. of reflagging and 750 lin. yd. of rekerbing in Argyle Street, Lever Street and Cooke Street, Hazel Grove, including concrete crossings and incidental works; and surfacing with hot rolled asphalt in Argyle Street, Lever Street and Cooke Street, Hazel Grove, including incidental and remedial works, for U.D.C.—Frank

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Goodwin, 120 Barmouth Street, Manchester, 11, £2,288.

Higham, Kent.—Repairs in tarmacadam, to Canal Road, for British Uralite, Ltd.—Hodsons, Ltd., 17 Wrotham Road, Gravesend.

Hull.—Road and sewer works, permanent housing site Clough Road, for City Council Sangwin, Ltd., Danson Lane, Hull.

Lambeth.—Permanent reinstatement of statutory undertakers' trenches, for B.C.—London Paving Co., Ltd., 21 Aylmer Parade, London, N.2, £3,231 (recommended).

Leicestershire.—Two and a quarter miles diversions and new road at Bruntingthorpe Aerodrome for C.C.—Reliable Roads (Shepshed), Ltd., Shepshed, Loughborough. Estimated cost £60,000.

Leicestershire.—Reconstruction and diversion of section of route A.6 at Wooden Bridge Corner, Market Harborough, for C.C. R. R. W. Grigson, county engineer and surveyor—Galliford and Sons, Ltd., The Heath, Wolvrey, Hinckley. Works expected to commence next April.

London.—Site clearance works on land bounded by London Wall and Basinghall Avenue, site C in redevelopment unit 4, for City Corporation—Wilmet Bros., Ltd., Baltic Wharf, Waterloo Bridge, London, S.E.1, £4,613 (recommended); Sir Robert McAlpine and Sons, Ltd., £6,603; Goodman Price, Ltd., £6,245; Mowlem (Civil Engineering), Ltd., £6,116; Fitzpatrick and Son (Contractors), Ltd., £5,569.

Londonderry.—Reconstruction of portion of the Coleraine-Kilrea road at Ballylagan for C.C.—W. M. Bolton and Sons, Kilrea, £64,016.

Loughborough, Leics.—Construction of roads and sewers at Model Farm estate, phases IV and V for William Corah and Sons, Ltd.—Reliable Road (Shepshed), Ltd., Loughborough. Work commenced.

Roads and sewers at Valley Road estate for William Davies and Co. (Leicester), Ltd.—Reliable Roads (Shepshed), Ltd.

Mere and Tisbury, Wilts.—Roadworks for the erection of four Homeville Traditional bungalows at The Old Hollow, Mere, for R.D.C.—Roads Construction (Contracting), Ltd., Frome.

Middlesex.—Following for C.C.: Construction of St. Albans Road flyover over the South Mimms By-pass, Tarmac Civil Engineering, Ltd., 50 Park Street, London, W.1, £67,492 (recommended negotiated tender, subject to Ministry approval).

Completion of the widening works on the Western Avenue viaduct—Howard Farrow,

Ltd., Golders Green Road, London, N.W.11, £14,000. (Recommended, subject to Ministry approval.)

Newent, Glos.—Construction of 1,250 sq. yd. of tarred macadam carriageway, laying of 300yd. of 6in. and 9in. soil and surface water sewers, construction of five brick manholes and laying of 180yd. of 3in. water main, at West View, for R.D.C.—K. Ryan, Hardwick, Glos., £3,308 (accepted); Douglas and Warren, £5,949; Asphalt and P. Works, Ltd., £3,619; Broughton Plant Hire, £4,250; Whiltonham Surfacing Co., £5,201.

Pembroke.—Runway extension and other works at the Royal Naval Air Station, Brandy, near Haverfordwest, for Admiralty—Taylor Woodrow Construction, Ltd., Quisip Road, Southall, Middx. Estimated cost £600,000. Work to begin shortly.

Reigate, Surrey.—Improvements to the entrance road to the High Street Car Park, for B.C.—J. Bray 36 River Park Gardens, Ravensbourne Avenue, Bromley, Kent, £1,370.

St. Marylebone.—Following for the parking meter scheme for B.C.: Supply of parking meters and ancillary equipment—Vennor, Ltd., Kingston By-pass, New Malden, Surrey, £32,410; supply of signs and equipment for signposting—Bergo, Ltd., Queen Mary's Avenue, Rickmansworth Road, Watford, Herts, £1,395 (recommended).

Erection of meter posts, traffic signs and ancillary works in zone 3, including the construction of the central reservation in Portland Place—London Paving Co., Ltd., 21 Aylmer Parade, London, N.2, estimated cost £6,000; erection of meter posts, traffic signs and ancillary works in zone 4—Percy Bilton, Ltd., 113 Park Street, London, W.1, £3,000 (recommended).

Provision and laying of plastic road markings—Constructex, Ltd., Oyster Lane, Byfleet, Surrey (recommended).

St. Marylebone.—Improvements to the east side of Portman Square, for B.C.—St. Mary's (Contractors), Ltd., 273 Sussex Way, London, N.19, £34,615 (recommended, subject to reductions and grant aid).

Sandown-Shanklin, I. of W.—Reconstructing part of Regent Street, Shanklin, for U.D.C. T. Josey, engineer—Cheek Bros., 1 Church Litten, Newport, £8,081 (accepted); Vectis Stone Co., Ltd., £8,485; W. G. Elliott, £8,752.

Sedgeley, Staffs.—Resurfacing of about half the car park at the rear of the Red Lion Inn, for U.D.C.—C. J. Pearce, Dawley, Salop, £950.

Sutton and Cheam, Surrey.—Extension of Sutton Cemetery for B.C.—W. J. Glossop, Ltd., 123 East Hill, London, S.W.18, £23,672 (recommended).

Teddington, Middx.—Structural repair works to the South Pier of the Suspension Bridge and repainting works at the Teddington Lock Footbridge and Suspension Bridge, for the Thames Bridges Joint Committee—John Shelbourne and Co., Ltd., Battlebridge House, Tooley Street, London, S.E.1, £988, and T. H. Kenyon and Sons, Ltd., Chancillon Works, Croxley Road, London, W.9, £592 respectively.

Tyrone.—Reconstruction of two miles of road at Birnagh, Newtown Stewart for C.C.—Hendly Bros., Ltd., Omagh, £172,870.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Amersham, Bucks.—Lodge Lane drainage scheme comprising 1,430 lin. yd. of 6in. s.g.w. pipes with Hepsal joints, 4in. s.g.w. connections and 13 manholes together with ancillary works, for R.D.C.—J. Bray, 36 River Park Gardens, Ravensbourne Avenue, Bromley, Kent, £6,185.

Battersea.—Erection of 15 new sewer ventilating columns, for B.C.—J. E. Billings and Co., Ltd., 54 Beddington Lane, Croydon, Surrey, £1,414 (recommended).

Bradford, Yorks.—Construction of sewers for housing development at Sal Nook estate at Cleckheaton Road, for City Council—Direct Labour, £2,200 (recommended).

East Ashford, Kent.—Wye, Hamstreet and Chilham sewerage and sewage disposal schemes, for R.D.C.—comprising the construction of three sewage disposal works consisting of sedimentation tanks, percolating filters, Humus tanks, sludge drying beds, and other appurtenant works; three pumping stations; spun-iron and asbestos-cement rising mains, and the laying of about 2,000yd. of 9in., 7in., 6in. and 4in. sewers and house drain connections. K. A. Pilkington, surveyor—C. Jenner and Son, Ltd., Folkestone, £45,278, Hugh Brown (Engineers), Ltd., Ashford, £38,180 and £41,304 respectively. Work to commence this month.

Epping and Ongar, Essex.—Additional sludge drying beds (area approximately 6,150 sq. ft.) at the Stanford Rivers sewage disposal works, Ongar, for R.D.C.—W. and C. French, Ltd., 50 Epping New Road, Buckhurst Hill, Essex, £3,904 (subject to Ministry approval).

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Eton, Bucks.—Diversion of foul sewer for the Chiswick to Langley special road scheme comprising the diversion and relaying of 92 lin. yd. of 12in. s.i. sewers and 67 lin. yd. of 15in. s.i. pipe and building four manholes and the drainage of Whigatts Covert, Denham, comprising 875 lin. yd. of 3in. s.i. pipe and a small pump house, for R.D.C.—J. Bray, 36 River Park Gardens, Ravensbourne Avenue, Bromley, Kent, £4,202 and £1,489 respectively.

Exeter.—Following for City Council: Construction of foul sewers for stage 3 of the Inner By-pass Road—W. J. Clemens and Co. (Contractors), Ltd., East Budleigh, Budleigh Salterton, Devon, £94,285 (subject to Ministry approval).

Construction of a 54in. diameter pipe culvert under the approach road to Claperton Railway Bridge—W. J. Clemens and Co. (Contractors), Ltd., £1,604 (recommended).

Piping of stream adjoining Northbrook Approved School, Whipton—W. and J. Glossop, Ltd., Exhibition Way, Pinhoe Trading Estate, Exeter, £16,563 (recommended, in lieu of previous tender).

Fulham.—Reconstruction of the sewers in Breer Street, Dymock Street, Langford Road (part), Claxton Grove (north section) and Yeldham Road, for B.C.—J. E. Billings and Co., Ltd., 54, Beddington Lane, Croydon, Surrey, £32,009 (recommended); Fitzpatrick and Son, Ltd., £36,766; Percy Bilton, Ltd., £37,289; M. J. Gleeson, Ltd., £38,676; William Old, Ltd., £38,842.

Godstone, Surrey.—South Godstone sewage disposal works—construction of two reinforced concrete storm water tanks and pumping pump, pumphouse and flume channels, together with the laying of approximately 205yd. of 12in. diameter cast-iron pipe soil sewer, 270yd. of 9in. diameter stoneware pipe soil sewer, and other ancillary works for R.D.C.—T.H. (Contractors), Ltd., 300 Chiswick High Road, London, W.4.

Hammersmith.—Reconstruction of part of the sewer in Maclese Road, for B.C.—Fitzpatrick and Son (Contractors), Ltd., 455 Old Ford Road, London, E.3, £4,426 (recommended); Alderton Construction Co., Ltd., £4,612; The Demolition and Con-

struction Co., Ltd., £4,638; W. and J. Glossop, Ltd., £4,822.

Harrogate, Yorks.—Drainage of the Borough scheme G.16, for B.C.—Walter G. Birch (Harrogate), Ltd., Monpellier House, Harrogate, £3,892 (recommended, subject to Ministry approval).

Harrow, Middx.—Culverting an open watercourse in Hill View Road and Hill View Close, Hatch End, for C.C.—Fulwood Construction Co., Ltd., Twickenham Road, Hanworth, Feltham, £17,174 (recommended).

Irlam, Lancs.—Construction of a sewer at Roscoe Road for U.D.C.—Thomas Corneil and Co., Ltd., Stockport, £4,394.

Lytham St. Annes, Lancs.—Replacement of two centrifugal sewage pumps, motors and automatic starters at No. 1 pumping station for B.C.—Pullsometer Engineering Co., Ltd., 39 Victoria Street, London, S.W.1, £4,165 (recommended).

Maldon, Essex.—Parish of Purleigh, sewer extension, for R.D.C., including the construction of 940yd. of 6in. diameter asbestos-cement pipe sewer, together with 13 manholes and ancillary work—Bishop and Harding, Southminster, £6,987; Appleton and Son, £7,600; Harrington and Devlin, £9,296. Work to commence Jan. 1962.

Middlesex.—Supply and installation of sludge-lifting machinery at Ramme Marsh Sludge Disposal Works, contract EMR.5, for C.C.—Templewood Hawksley, Ltd., 2 Buckingham Avenue, Slough, Bucks., £208,359 (recommended).

Newbury Berks.—Construction of the superstructure at London Road Pumping Station, for B.C.—Shephard Hill and Co., Ltd., 25-27 Central Chambers, Ealing Broadway, London, W.5, £4,717 (recommended).

Reigate, Surrey.—Construction of 132 lin. yd. of 15in. surface water sewer at Petridgewood Common, Redhill, together with ancillary works, for B.C.—J. Bray, 36 River Park Gardens, Ravensbourne Avenue, Bromley, Kent, £1,498 (subject to Ministry approval).

Rotherham, Yorks.—Laying of 450yd. of 9in. concrete pipes, together with manholes; rising mains comprising 444yd. of 5in. diameter and 144yd. of 6in. diameter spun-iron pipes; the construction of a pumping station, and other ancillary works at Fence sewerage works, G. W. Roddis, engineer and surveyor—West Riding Build-

ing Contractors, Ltd., Thurcroft, near Rotherham, £13,292.

Shepshed, Leics.—Drainage and water mains at Glenmore estate for U.D.C.—McCarthy Collings and Co., architects, 187 Forest Road, Coalville, Leicester—Reliable Roads (Shepshed), Ltd., Shepshed (subject to Ministry approval).

Shrewsbury, Salop.—Provision of new foul sewer at Shelton Hospital, for Birmingham Regional Hospital Board—Curral Lewis and Martin, Ltd., 11 Booth Street, Birmingham, 21, £15,756 (recommended).

Truro, Corn.—Construction of the Tregony sewerage scheme, for R.D.C.—Osmand and Lane, consulting engineers, Trevemper Lodge, Trevemper Grange, Newquay—F. W. Hunt (Cornwall), Ltd., Redruth, £32,436. Work to commence Dec.

Wallingford, Berks.—Extension of the Cholsey Sewage Disposal Works, for R.D.C.—The Tilbury Construction Co., Ltd., Ruscombe Works, Twyford. Estimated cost £102,540.

STREET LIGHTING

Chatham, Kent.—Conversion of gas street lighting into electricity for B.C.—Eleco, Ltd., Sphere Works, St. Albans, Herts., £75,334 (recommended).

Islington.—Improvement of street lighting at Hornsey Lane, for Islington and Hornsey B.C.'s—Machinery Installations, Ltd., Acton, W.3, £2,593 (recommended).

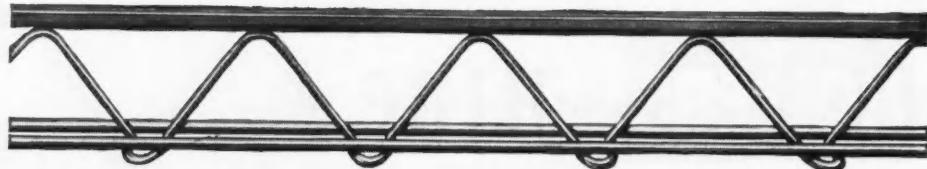
Lytham St. Annes, Lancs.—Supply and erection of nine new concrete columns, 85 new cast-iron columns, the repositioning of 25 cast-iron columns and the renewal of 42 cast-iron brackets on existing columns, for B.C.—Revo Electrical Co., Ltd., Tipton, Staffs.

Middlesex.—Provision of lighting for Wraysbury Roundabout at Staines By-pass, for C.C.—Atlas Lighting, Ltd., 233 Shaftesbury Avenue, London, W.C.2, £3,003 (recommended, subject to Ministry approval).

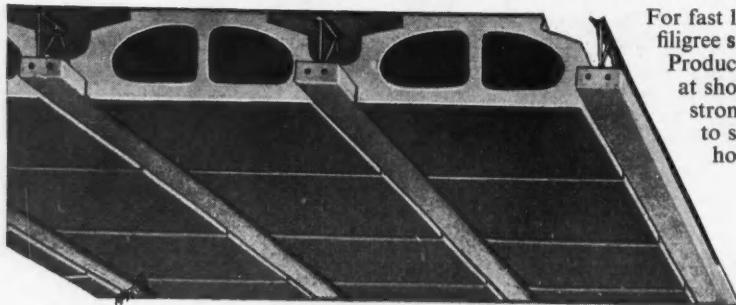
Orrell, Lancs.—Supply, erection and wiring complete, with lantern, gear, etc., of 44 street lamps on various estates within the Urban District, for U.D.C.—J. A. Morris, engineer and surveyor—Abacus Municipal, Ltd., Sutton-in-Ashfield, Notts.

Ripon, Yorks.—Supply and erection of 24 street lighting columns and fittings for Class A lighting and 103 street lighting columns

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and fittings for Class B lighting, for City Council—A.E.I. Lamp and Lighting Co., Ltd., Trafford Park Road, Manchester, 17, £5,310 (recommended).

St. Marylebone.—Supply of 30 Stewarts and Lloyds Gb. 584 steel columns with sodium lamps at St. John's Wood, for B.C.—General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2 (recommended, extension of contract).

Stoke Newington.—Provision of street lighting at Albion Road and Stoke Newington Church Street, for B.C.—General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2, £6,542 (recommended).

GOVERNMENT CONTRACTS

Admiralty.—Particulars of contracts, over £4,000 in value, placed by Navy Works Department:

Hampshire: Rehabilitation of laboratory—John Hunt, Ltd., Gosport, Hants.

Fifeshire: Construction of store—David Anderson, Ltd., Dunfermline.

Air Ministry.—Contracts to the value of £4,000 or over for the week ended Oct. 20:

Building work: Abingdon, Berks.—E. and J. Cotton, Ltd., Iver, Bucks.; UXbridge, Middx.—W. H. Streeter, Ltd., Hampton, Middx.; Honington, Suffolk—Walter Lawrence and Son, Ltd., Swaffham, Norfolk; Mormond Hill, Aberdeenshire—Alexander Hall and Son (Builders), Ltd., Aberdeen.

Surfacing work to existing paved areas: Aldergrove, Northern Ireland—The Limmer and Trinidad Lake Asphalt Co., Ltd., Belfast.

Artificers' work: Yatesbury (Wilts.), etc.—Filton (Bristol), etc., Andover (Hants), etc.—Dudley Coles, Ltd., Plymouth, Devon.

Painting work: Farningley, etc., Yorks.—Joseph V. Dowling, Rotherham, Yorks.; Shinfield Park (Berks.), etc.—Fields (Reading), Ltd., Reading, Berks.

Preparation and maintenance of land: St. Mawgan, Cornwall, Chivenor, Devon, etc.—Land Products, Ltd., Wimborne, Dorset; Mount Batten, Devon, etc.—E. Widdicombe, Yealmpton, Devon.

Ministry of Finance, Northern Ireland.—Contracts exceeding £250 in value placed during the period Oct. 2 to Oct. 20, inclusive:

Supply, etc., prefabricated built-in wardrobe-cupboards: Ministry of Agriculture, Loughry Agricultural College, Cookstown—R. and S. Woods, 18-28 Woodland Avenue, Belfast, 14.

Electrical installation: new office building, Ballymoney—The Rotary Electric Co. (Belfast), Ltd., 25 North Thomas Street, Belfast, 15.

External and part internal decoration: Ministry of Commerce, B.S.R. Factory, Pennyburn—Robert Gallagher, 11 Limavady Road, Londonderry.

Supply, etc., generator set: Ministry of Agriculture, Gosford—Wm. J. Gamble and Sons, Ltd., 78-82 Cromac Street, Belfast, 2.

Supply, etc., structural steelwork: Head Post Office, Lisburn—Smyth Mills, Ltd., 80 Duncrue Street, Belfast, 3.

Construction of cattle and sheep pens: Ministry of Agriculture, Mullenan—Derry Construction Co., Ltd., Duncreggan Road, Londonderry.

Supply, etc., low pressure hot water: T.E.C., Pennyburn, Londonderry—D. M. Holmes, 24 Abercorn Road, Londonderry.

Supply, etc., oil-burning equipment: Parliament Buildings, Stormont—Johnston Bros., Main Street, Hillsborough.

Construction of Fishery Inspector's Office: Ministry of Commerce, Kilkeel—W. J. Hanna, Newcastle Road, Kilkeel.

Supply, etc., new oil-burning plant: R.U.C. Depot, Enniskillen—Richard Finlay, Whitehouse, Newtowntaberry.

Supply, etc., new high pressure hot water heating boiler: R.U.C. Central Stores, Sprucefield—Johnston Bros. and Wilson, Ltd., 59 Ravenhill Road, Belfast, 6.

Resurfacing of roads: Ministry of Commerce, Ardglass Harbour—Samuel J. Martin, Glassdrummond Quarries, Ballynahinch.

External and internal cleaning and painting: R.U.C. Station and Married Quarters, Dunmurry—Wm. McLardy, 51 University Road, Belfast, 7.

Erection of one forester's cottage: Ministry of Agriculture, Forestry Centre, Glenarm—Samuel Ross, Ltd., Ardath, Church Road, Newtownabbey.

External and internal cleaning: Courthouse, Lurgan—Wm. Hollywood, 99 Victoria Street, Lurgan.

Supply, etc., nickel silver glazed screens: Petty Sessions Courts, Belfast—Henry Hope and Sons, Ltd., Halford Works, Smethwick, Birmingham.

Internal cleaning, etc., to nine cottages and three houses: Ministry of Agriculture, Loughry—Murphy Bros., Ltd., 53 Loy Street, Cookstown.

Construction, etc., new rye-grass house: Ministry of Agriculture Loughgall Plant Breeding Centre—A. C. Simpson, Railway Street, Armagh.

Internal and external cleaning and painting: Ministry of Agriculture, Greenmount—James Garvey and Co., Ltd., 1a Grosvenor Place, Belfast, 12.

Electrical installation: H.M. Prison, Belfast—John Dowling and Sons, Ltd., Upper Queen Street, Belfast, 1.

Ministry of Works.—Contracts placed for week ended Oct. 14:

Bedfordshire: Podington—erection of Home Office store—Maurice Hill, Ltd., Blendworth House, Horndean, Hampshire.

Berkshire: Broadmoor Hospital, Crowthorne—supply, deliver and erect high-level storage tank—Braithwaite and Co. (Structural), Ltd., P.O. Box 2, Gt. Bookham, Surrey.

Buckinghamshire: Joint Services Staff College, Latimer House, Chesham—installation of oil-fired boiler—Southern Heating, Ltd., Cox Green, Maidenhead, Berkshire.

London: Bethnal Green Museum, E.—repairs to brick and stonework—W. J. Southgate, 65 Kenway Road, Earls Court, London, S.W.5; National Maritime Museum, Greenwich, S.E.—external treatment and decoration—Sykes and Son, Ltd., 8 Essex Street, Strand, W.C.2.

Middlesex.—Ship Hydrodynamics Laboratory, Feltham—installation of water pumping set—The English Electric Co., Ltd., Dunning's Bridge Road, Netherton, Bootle, 10, Lancashire.

Staffordshire.—Post Office, Turl's Street, Sedgeley—erection of telephone exchange—A. J. Crump and Sons, Ltd., Aston Road, Dudley, Worcestershire.

Warwickshire.—Post Office, Lichfield Road, Four Oaks—erection of telephone exchange—J. Miller and Partners (Hayes), Ltd., Pump Lane, Hayes, Middlesex.

Yorkshire.—War Department, Depot, Harrogate Road, Yeadon—internal painting—R. Ainsworth, Ltd., 273 Otley Road, Leeds, 10; Kingston-upon-Hull—erection of telephone exchange—Stepney Contrs., Ltd., Grovehill, Beverley, Yorkshire.

Post Office.—Contracts for duct laying, etc., works to the value of £4,000 and over placed during the week ended Oct. 14:

John Brown and Sons (Wolverhampton), Ltd., Hanley, Chell Street, Stoke-on-Trent, Staffs.; C.D.L. Construction Co., Ltd., Church Road, Egham, Surrey; W. and C. French, Ltd., 50 Epping New Road, Buckhurst Hill, Essex; The North Midland Construction Co., Ltd., Portland Works, Daybrook, Nottingham; The Northwest Construction Co., Ltd., Litherland, Liverpool, 21; Stanley Raymond and Co., Ltd., Sussex Road, Southall, Middx.; George Taylor (Wolverhampton), Ltd., The Viewlands, Cross Road, Albrighton, Wolverhampton, Staffs.

Contracts for duct laying, etc., to the value of £4,000 and over placed during the week ended Oct. 21:

Christie and Co. (Contractors), Ltd., Raemoir Road, Banchory, Kincardines.; Chas. G. Inkster (Ainwick), Ltd., 5 Paikes Street, Alnwick, Northumb.; The Northwest Construction Co., Ltd., Litherland, Liverpool, 21; Wm. Press and Son, Ltd., 22 Queen Anne's Gate, Westminster, London, S.W.1; D. J. Sullivan (Bristol), Ltd., 16 Burlington Road, Redland, Bristol, 6.

War Department.—Contracts placed for the week ended Oct. 20:

Anglesey (Ty Croes Camp): painting and decorating—George Jones and Son (Contractors), Ltd., Liverpool.

Kent (Ashford) roofing—C. Jenner and Son, Ltd., Folkestone.

Merioneth (Tonfanau Camp): internal decorating—T. E. Cundy and Son, Ltd., Leicester, (Towyn): hutting repairs—Watkin Jones and Sons, Ltd., Bangor.

Norfolk (Cranwich and West Tofts): kitchen equipment—C. F. E. Bartlett and Son, Ltd., Hemel Hempstead; electrical—Penmar and Co., Ltd., London, W.9.

Shropshire (Dunnington): nissen huts repairs—Whitchurch (Salop) Contractors, Ltd., Whitchurch.

Sussex (Chichester): building—Farrans, Ltd., London, W.1.

Warwickshire (Bramcote): horticultural—Mould and Bloomer, Grantham.

Wiltshire (Bulford): painting and decorating—Ian Williams and Co., Ltd., Cardiff; building—Downing Rudman and Bent (Salisbury Plain), Ltd., Salisbury.



Trade and Company News**NEW COMPANIES**

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

F. Harris and Sons (Builders), Ltd., Dunheved, Fourth Avenue, Teignmouth, Devon. £3,000. Directors: Frank A. C. Harris, Dunheved, Fourth Avenue, Teignmouth; Leslie J. F. Harris, Forge, Inverteign Drive, Teignmouth; Winifred S. M. Harris and Norman G. Harris.

H. H. Roberts (Builders), Maidstone, Ltd. £1,000. Permanent directors: Henry H. Roberts and Alice L. M. Roberts, Lynkay, Lambs Lane, Rainham, Essex.

J. Garner and Bros., Ltd., 10 Luggs Lane, Widnes, Lancs., demolition, haulage and transport contractors, etc. £1,000. Directors: John Garner and Trevor Garner, 10 Luggs Lane, Widnes, Lancs.; Joseph G. Garner, 19 Chatham Street, Widnes.

Snettisham Concrete Products Co., Ltd., Common Road, Snettisham, Norfolk. £2,000. Directors: Martin Crannis, Brook Road, Dersingham, Norfolk; Wm. S. Markham, Common Road, Snettisham; Fredk. R. Easton; Kenneth T. Jones and Herbert D. Rae.

First Avenue Construction Co., Ltd., builders. £100. Directors: S. E. Newman, 408 Strand, W.C.2; C. Wilkins; G. Wilkins and R. Berry, addresses not stated. Subscribers: C. Newman, 37 Silkfield Road, N.W.9 (secretary).

Morgan Bros. (Concrete Products), Ltd., Barclays Bank Chambers, Aberdare. £100. Directors: Thomas R. Morgan, 58 Brecon Road, Hirwaun, Glam.; Sidney Morgan, Tyn-dale, Park Avenue, St. Ives, Hunts.

Sainsbury (Builders), Ltd., 34 Heol Iscoed, Rhiwbina, Cardiff. £1,000. Directors: Walter Sainsbury, 10 Tywyn Road, Rhiwbina, Cardiff; Walter R. Sainsbury, 34 Heol Iscoed, Rhiwbina, Cardiff.

North Hampshire Plant Hire, Ltd., Peveril, Monxton Road, Grateley, Andover, Hants. £2,000. Directors: Arthur Walters and Doris L. Walters, Peveril, Monxton Road, Grateley, Andover; John H. Warner.

D. Miles (Builders), Ltd., Edward Street, Denton, Lancs. £2,000. Directors: David R. Miles, 35 St. Annes Road, Denton, Lancs.; Stanley Moss, 44 Farm Lane, Hyde, Cheshire; Terence W. R. Snell.

Horn and Pibworth Construction, Ltd., 21 Victoria Street, Brighton 2, builders. £1,000. Directors: Harold C. Horn and Rose M. Horn, 13 Netherfield Green, North Woodingdean, Brighton; David J. Pibworth and Daphne F. Pibworth, 55 North Road, Portslade by Sea.

F. H. Hargreaves and Son, Ltd., builders. £2,000. Directors: Geoffrey Hargreaves and Elsie Hargreaves, 88 Elland Road, Churwell, near Leeds.

Subcontractors (Bristol), Ltd., 14 Smithcourt Drive, Little Stoke, Patchway, Glos. builders. £100. Directors: Eric Woolley, 14 Smithcourt Drive, Little Stoke, Patchway, Glos.; Raymond A. Paisey, 115 Barrowmead Drive, Lawrence Weston, Bristol.

Peter Campbell and Sons, Ltd., 56 North Park Grove, Roundhay, Leeds, 8, builders. £100. Directors: Peter Campbell and Mrs. B. H. Campbell, 56 North Park Grove, Roundhay, Leeds, 8.

Barnett and Walls, Ltd., 140 Mitcham Road, East Ham, E.6, builders. £1,000. Directors: Ronald R. Walls, 140 Mitcham Road, East Ham, E.6; Alan G. Barnett, 30 Laurel Close, Barking, Ilford, Essex.

Aldridge and Downs, Ltd., 34 Crown Street, Reading, builders. £1,000. Directors: Norman Aldridge and Sheila M. Aldridge, 30 Brooksbury Road, Reading; Reginald Downs, 117 Netherhampton Road, Salisbury.

Chersey Concrete Co., Ltd., Chilsey Green Road, Chertsey, Surrey, concrete products. £2,000. Directors: George Cawley, Old Common Farm, Chobham, Surrey; Paul A. Sizmur, Maytree Cottage, Stonehills Road, Chertsey, Surrey.

J. R. Stewart (Plant Maintenance), Ltd., 290 High Street, Langley, Bucks. £500. Directors to be appointed by subscribers. Subscribers: Sidney J. Birkett and Raymond J. Lye, 6 Hanover Square, W.1.

Harper Developments, Ltd., builders. £2,000. Directors to be appointed by subscribers. Subscribers: Rosamund W. Simons, 11 Priory Road, Edgbaston, Birmingham; Ethel E. James, 9 Hamlet Road, Hall Green, Birmingham, 28 (secretaries).

Gleeson Co., Ltd., Little Drove House, Singleton, Sussex, building contractors. £100. Directors: Basil D. M. James and Joyce James, Little Drove House, Singleton, Sussex. Allen Spavin, Ltd., 65 Doncaster Road, Scunthorpe, builders. £5,000. Permanent directors: Allen Spavin, 43a Newland Avenue, Scunthorpe; Jesse Spavin, 34 Kingsway, Scunthorpe.

Chamberlain Reinforced Concrete, Ltd., 3 Buckingham Palace Gardens, S.W.1. £100. Directors: Leslie F. Chamberlain, Flat 4, 104 Eaton Place, S.W.1; Laurence J. Bradshaw, Huntley, Oxford Road, Gerrards Cross, Bucks.; John C. Pert, Neepawa, Wellington Hill, High Beech, Essex.

G.Y. Constructions, Ltd., building and civil engineering contractors. £100. Directors not named. Subscribers: Reginald F. Farnes, C.A., and Peter J. Digby, C.A., 46 Bedford Row, W.C.1.

PROPANE-FIRED MOBILE AIR HEATER

FOR drying out new and renovated buildings a new mobile air heater has been introduced by Woods of Colchester, Ltd., Braiswick Works, Colchester.

Air delivery may be either direct discharge from the heater outlet or an adapter can be provided for single-, two-, three- or four-duct outlets. Air is delivered at sufficient pressure to enable long lengths of flexible ducting to be employed and in certain circumstances the duct length can extend up to 390ft.

The equipment is direct-fired by propane and is fitted with runners for easy trans-



Mobile air heater

portation. Complete with all controls the heater only requires connecting to commercial propane bottles and the electricity supply.

Gas consumption at maximum output is 200 cu. ft. per hour, equivalent to 23lb. weight per hour and the nominal heat output is 500,000 B.Th.U.

Performance figures vary depending on the air flow—110 deg. F. temperature rise can be achieved at 4,000 c.f.m. while with the airflow at 6,000 c.f.m. temperature rise is 75 deg. F.

Other uses of the air heater include warming up of vehicles and supplying heated air for industrial processes. For fume dispersal or fresh air supply in confined spaces the equipment may be employed with the heating system inoperative.

Prices of the heater are from £186 10s. It is also available on hire.

TOWER CRANE REACHES 364ft. WORKING HEIGHT

THE Pingon P.200 tower crane being employed by Sir Robert McAlpine and Sons, Ltd., on the erection of a 25-storey office block at the Stag Brewery site, London, S.W.1, is now working at a height of 364ft.

An additional section has been fitted to the standard P.200 jib to give an extended outreach of 164ft. At this radius loads of 2 tons 4 cwt. can be lifted, the maximum capacity being 15 tons at 30ft.

The crane, a fixed base machine with 360-degree slewing, has grown with the building. Three special tie-off frames have been designed to secure the mast to the building at heights of 110ft. and 220ft.

Pingon cranes are sold in this country by George Cohen, Sons and Co., Ltd.



The crane seen from the base

MONTGOMERIE REID TAKE-OVER

The Montgomerie Reid Engineering Co., Ltd., announce that they have taken over R. H. Corbett and Co., Ltd., of Rochester, Kent, and will now manufacture and market the complete range of trucks which the company produced. This includes the "Hydriver", the "Hycaddy", the "Hydrum" and the "Hybin."

There will be no alteration in the names or prices of the trucks and servicing will now be undertaken by Montgomerie Reid's six depots in Cardiff, London, Birmingham, Manchester, Gateshead and Glasgow. D. P. Kathanode traction batteries which are standard equipment on all Montgomerie Reid models will now be fitted, where applicable, to the Corbett range.

NEW ECONOMY COATING

To meet a demand for a quality, moderately priced wall and ceiling coating, Jenson and Nicholson, Ltd., have just put on the market a new product—Robbialac Acquatint Vinyl Water Paint.

Obtainable in white and 17 B.S. 2660 pastel shades, and available in one-gallon and half-gallon cans, it is intended for interior use on factories, housing schemes, schools, etc., when cost is a primary consideration, the trade price being 32s. per gallon.

Trade and Company News

IMPROVEMENTS FOR B TOURNAPULL INCLUDE POWER-SHIFT TRANSMISSION

NEW production advantages, including greater capacity, less deadweight, simplified controls, and an optional new "Powerflow" transmission have been announced for the B tournapull by the LeTourneau-Westinghouse Co., Peoria, Illinois, U.S.A.

The "Powerflow 700" transmission is a constant-mesh, counter-shaft-type unit with full power-shift and torque-converter. Its release follows several years of development work and two full years of field testing.

Unusual operating advantages are claimed for the new LW power-shift transmission. Because its double-acting clutches cannot engage simultaneously, the two major causes of "shift-shock" have been eliminated: gear "underlap" and gear "overlap." The remaining cause of shock has also been eliminated, in that "aggressiveness" is made impossible be-

cause of the design of the unit's clutch friction members.

Lubrication of the transmission is "force-fed" through the shafts for the bushings. Bearings and gears are "fog" or "mist" lubricated, which reduces the amount of oil within the case.

The "B's" torque converter is gear-coupled, mounted "midship" and attached to the generator. The 18in. converter features integral sump design, and all converter fluid is full-flow filtered. Like other LW-built torque converters, this one utilises the "Schneider" system in which the stator is stationary.

Standard equipment includes a lock-up clutch and oil retarder. The lock-up clutch also engages automatically when the hydraulic brake is actuated, thus adding engine braking power to that of the hydraulic brake.

For equipment-users who prefer "straight-stick" drive, the B 'Pull will still

be offered with a Fuller L-1550 step-gear-type transmission, with LW High and Low Range.

New Scraper

The new model "B" has 25yd. struck, 32yd. heaped, and 37 tons capacity. When fully loaded the new "B" offers a power/weight ratio almost exactly the same as the previous, smaller capacity model.

The reason for this is that close to 5,000lb. of "deadweight" have been trimmed from the machine. The biggest weight-saving comes in extensive use of light high-tensile-strength steel in the yoke, apron, and structural members of the unit's Fullpak scraper.

Both the apron and bowl-hoist of the new "B" are now controlled by a single motor, rather than one motor each. This results in substantial reduction of generator loads, as well as in service and parts requirements. Instead of the standard electric motor and gearbox, a new single control unit has been developed to control apron and hoist.

Another important change is that the scraper is now controlled by three knobbed levers which provide instant feel-of-the-load response. The levers replace the traditional Tournapull fingertip tickler switches.

Other improvements in the "B" include a new tailgate design; "straight up" scraper side-sheets and new bowl-holding safety latches with automatic cut-out.

All of the earlier engineering advances that had been standard in the B 'Pull have been retained in the new model, according to LW engineers. They include electric control of scraper; two-speed-action electric steer; automatic tailgate-cable tightener; low, wide Fullpak scraper design; and the LW power-transfer differential.

Retained as standard is the unit's 430-h.p. GM 12V-71 diesel engine. Top speed of the "B" with step-gear transmission is 28.3 m.p.h. With the new power-shift transmission, top speed is 30 m.p.h.

Further details may be obtained from Jack Olding and Co., Ltd., Hatfield, Herts.



The B Tournapull

AUTOMATIC PARKING CONTROL AT MORDEN CINEMA

A TRIAL installation of an automatic car park control system has been put into operation at the Odeon Cinema, Morden, Surrey.

Motorists arriving at the car park barrier insert a coin in a box, whereupon the barrier arm swings up to a vertical position, allowing entry. Continuous measurement of the capacity of the car park is taken and when it is full a "Car Park Full" sign

is illuminated above the barrier operating mechanism.

Three bar treadles set in the roadway are jump-proof and directional. Exit from the park is free of charge, the barrier rising automatically as the car crosses the appropriate treadle.

The installation, known as the Parcoa system, is manufactured in England by Bowser International, Ltd., and is distributed in the U.K. by Parking Developments, Ltd., 2 Cranmer Road, London, S.W.9.



Parcoa parking controller

ADVICE ON SOME PAINTING PROBLEMS

The first of a new series of talks entitled "Is this Your Problem?" was given recently by Mr. H. E. Parker, of Goodlass, Wall and Co., Ltd., in association with their local distributors, at the County Hotel, Canterbury.

An audience of 120 heard some of the problems facing builders, decorators and architects discussed, and solutions put forward based on recent technical developments in the paint field.

Further talks will be given this year in Bournemouth, Maidstone and Ramsgate.

WIRE NET MAKING WITH A PUNCH

A new method of making blasting mats, protection nets, helicopter nets, etc., is the Netlock system now being manufactured in Great Britain by Blacks Minings Equipment, Ltd., 44 Masons Hill, Bromley, Kent.

With the system the wire ropes are laid on top of each other and the mesh is made with a tap of a hammer on the Netlock punch which is positioned at each cross-wire junction. The actual securing is achieved with the patented units.

FIRST AREA SALES OFFICE OPENED

James F. Low and Co., Ltd., Dundee, have opened the first of their area sales offices at Castle Bromwich Airfield, Chester Road, Birmingham, 24 (tel: Castle Bromwich 4771-2). All enquiries from England and Wales should now be addressed to the firm there, instead of the Dundee address.

Talking of Safety

by
"DRAGEE"

SINCE the new construction regulations were published I have received a number of inquiries about the safety supervisor's qualifications. This is not an easy question, because there is no recognised qualification for a safety supervisor in the academic sense, and it is necessary, therefore, to find some kind of standard which will be generally acceptable.

The job of the safety supervisor, safety officer or safety engineer, is relatively new to the construction industries. It came into being largely as the result of legislation, because since 1948, the appointment has been officially prescribed by regulation 98 of the Building Regulations. This must have had some beneficial effects, since we now find a similar requirement almost at the beginning of the Construction Regulations (General Provisions) of 1961. At the same time, it is well known that with many building firms, and particularly the smaller concerns, the appointment has been of token value only. There is a very great range indeed between the high-ranking safety officer of the progressive and safety-conscious organisation, and the reluctant, part-time, half-trained and quarter-effective person, whose job depends for its continuance only upon the amount of worry he can save his boss. This kind of individual, whose approach is always apologetic, can never be regarded as a real safety officer.

At the other end of the scale we find that the safety man is recognised as a senior official in his firm. In some cases the post is a highly-specialised one, demanding a scientific or engineering background, and possibly the possession of a degree or a recognised professional qualification.

Normally, however, the appointment falls somewhere between these two extremes, and I think it is very much to the credit of the safety officer's own organisation—the Institution of Industrial Safety Officers—that the standard has steadily improved. To some extent, this improvement stems directly from the special conditions of membership which have been imposed during recent years. In certain cases, a written examination must be taken

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

by the applicants. As a matter of passing interest, the Institution was originally formed as a section of the Royal Society for the Prevention of Accidents.

From the legal point of view, I would consider that a corporate member of this Institution would be accepted as a suitable person within the meaning of the regulation, but this should not be taken to imply that there is any real degree of uniformity, even amongst members. The range and diversity of experience of the individuals would virtually preclude the possibility—and even the desirability—of such uniformity.

How are safety officers trained? As I have already indicated, there are at present no academic bodies offering full-time courses in industrial accident prevention, although the rising demand for well-trained officials in various branches of industry may, one day, bring this about. At present the only courses available to entrants are the two-week training courses given by Ro.S.P.A., and the one-week courses (held once a year) at the Brixton School of Building.

This may cause some people to raise their hands in astonishment, and demand to know how a senior official can be created in one or even two weeks? Well, the answer is, of course, that he just can't be. The truly competent safety officer is nearly always a person who has had first hand experience—usually of a supervisory nature—in the particular type of industry in which he is engaged. His transfer to the rôle of safety officer is then simply a matter of adjusting his experience to a new technique. This requires certain changes in outlook, and the acquisition of new knowledge concerning the legal and practical aspects of accident prevention. Obviously, if the man was already safety-conscious—as so many efficient supervisors are—the adjustment is not at all difficult. This is the special training which the courses I have mentioned are designed to give, and do, in fact, give most effectively.

But, of course, the man's industrial background and his safety training will not of themselves convert him instantly into a fully-fledged safety officer. He will need to gain further experience, and the best way of doing this is to find a job as an assistant to a safety officer of long standing. If he is lucky in this respect and finds both a good firm and a good instructor, he will have mastered the elements of his new occupation in some

two years' time. After that, as in every trade and profession, he will be learning for the rest of his life. That is the kind of qualification which he will be (or should be) expected to have when he first applies for the position of safety officer to a company.

I have left to the end one aspect of the safety officer's personal make-up. This is his *personality*. Accident prevention is a peculiar mixture of technology and psychology. In his daily work he will be constantly in contact with both management and rank-and-file. He will do well if he can, as Kipling says, "... walk with kings nor lose the common touch...."

ANOTHER POWER STATION FOR YORKSHIRE

The Central Electricity Generating Board have received consent from the Minister of Power for the construction of the second of the two large new power stations it is planned to build in the West Riding of Yorkshire. Consent for the first, at Ferrybridge, was given last August.

The new station will be situated on the River Aire at Eggborough, some six miles east of Ferrybridge. The main plant will comprise four turbo-generators, each of 500-MW installed capacity, and four boilers, each with an evaporative capacity of 3,450,000lb. of steam per hour. Steam conditions at the turbine stop valve will be 2,300lb. per sq. in., 1,050 deg. F., with reheat to 1,050 deg. F.

The capacity of the plant at Eggborough will be 2,000-MW, the same as at the new Ferrybridge C and West Burton power stations. They will, therefore, be the three most powerful steam stations in Western Europe.

Work on site is expected to begin early next year, and the first unit is programmed to be commissioned in 1966. The station is due to be completed in 1968, a year after the completion of Ferrybridge C.

£500,000 GLASGOW OFFICE BLOCK Spring Tenders Planned

Tenders will be invited early next spring for the construction of a nine-storey office block near Charing Cross, Glasgow, estimated to cost about £500,000.

Designed by Royce, Stephenson and Tasker, 3 Field Court, Grays Inn, London, W.C.1, the block will have two penthouse flats, a basement car park for 42 cars, and a petrol filling station.

The promoters of the scheme are Parway Land and Investments, Ltd., 194 Finchley Road, London, N.W.3. Cyril Sweett and Partners, 37 Bedford Row, London, W.C.1, are the quantity surveyors, and Clarke, Nicholls and Marcel, 21 Westbourne Grove, London, W.2, the consulting engineers.

CHAMBERLAIN INDUSTRIES APPOINT JAPANESE AGENTS

Chamberlain Industries, Ltd., London, E.10, have appointed Iino Sangyo Kaisha, Ltd., Osaka Branch, Shin-Osaka Building, No. 25, 1-Chome, Dojima-Hamadori, Osaka, Japan, to represent them in Japan for the sales of specified benders from the Staffa range.

"MIGHTY MIDGET" DISTRIBUTORS

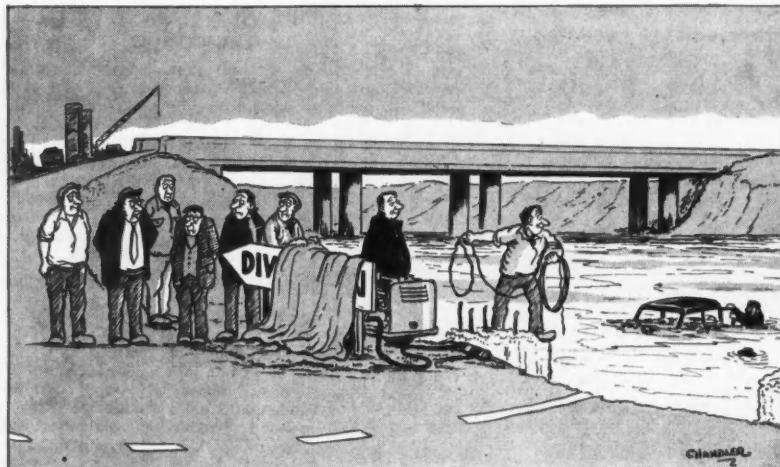
To the Editor of "The Contract Journal,"

Sir,—We were very interested to see in your issue of October 19 the description of the "Mighty Midget" 200-amp portable welding set which, as you state, the Mobile Haulage Co., Ltd., are marketing in London and the home counties.

Your readers may be interested to know that we are the distributors for this set in the counties of Nottinghamshire, Derbyshire, South Yorkshire, Leicestershire, and Staffordshire.

Yours, etc.,
MICHAEL F. KELLY
Director.

Kelly Equipment Co., Ltd.,
Ilkeston,
Derbyshire.



"I'd like to spread YOU out to dry!"

RESIDENTIAL COLLEGE FOR DURHAM

Main Block Completed at Grey College

FOLLOWING the completion of the £260,000 main block of Grey College, Durham, the whole college was officially opened last week by Earl Grey, Deputy Lieutenant of Northumberland.

The main block has taken two years to complete. Accommodation comprises 68 individual bedrooms incorporating built-in fitted wardrobe, desk and chair. There are also 22 rooms for administrative accommodation, four staff flats, spacious common rooms, library, and music rooms in the building.

One of the main features is the dining hall, notable for its panelling in teak and afromosia. It has an acoustic heated ceiling and a hardwood strip floor which can be used for dancing.

Another interesting feature has been incorporated in the upper concourse. Four white leather covered doors used at the coronation of Her Majesty The Queen, have been used as effective wall panels.

The building is planned round a quadrangle with the main block, consisting of the hall, common rooms and administration, projecting to the north.

Having been set back into a hillside, parts of which have a gradient of about 1 in 5, the structure has been built on

various plateau levels. It has one, two, three and four stories, with pitched tiled roofs and over certain portions flat asphalt roofs.

The site, Fountain Field, lived up to its name, springs and the remains of the monks' water supply system, which, it is understood, was carried by means of a viaduct on to the cathedral and castle peninsular, were found.

Provision had to be made to stop the water percolating through the sandy strata, and those springs which were uncovered had their flow diverted into a sewer.

The approach to the college is by two steep driveways, which pass a new porter's lodge.

Consultants and Contractors

The architects were Thomas Worthington and Sons, 178 Oxford Road, Manchester, 13; consulting engineers, C. S. Allott and Sons, Fairbairn House, 100 Washway Road, Sale; quantity surveyors, C. W. Davidson and Co., 178 Oxford Road, Manchester, 13.

The main contractors were Holland & Hannen and Cubitts (Scotland), Ltd., North East Area Office, Central Administration Building, Team Valley Trading Estate, Gateshead, 11.



The main block of the Grey Residential College

NORTH STAFFS. BUILDERS' SAFETY LEAD

From A Correspondent

A UNIQUE six months' accident prevention experiment has just been completed in North Staffordshire.

With the full support of H.M. Factory Inspectorate the North Staffordshire Association of Building Trades Employers appointed a safety officer to supervise the operations of 14 member firms. Between them they employ approximately 500 operatives.

At a special meeting of the association last week the safety officer, Mr. L. E. Allen, a retired master builder and a former president of the association, reported on the pilot scheme. At any one time he was responsible for upwards of 50 sites. In the six months 400 inspections were made.

At the conclusion of a visit a report is written and a copy left with the foremen. One of Mr. Allen's maxims is that 90 per cent. of accident prevention work must be done on site.

Each firm and their sites are coded and indexed. Graphs record visits, developments and safety standards on every site.

The experiment proves that a safety officer for a number of firms is a practical proposition. Under the new regulations to come into force in March, 1962, every contractor who normally employs more than 20 persons on construction work must appoint a safety officer on a full- or part-time basis. This novel experiment shows the way for medium and small firms.

Mr. Allen's appointment is honorary. On a group basis the cost of a salaried safety officer would be reasonable, producing lower insurance premiums and greater productivity.

Both H.M. Factory Inspectorate and the Midland Federation of Building Trades Employers are keenly interested in this scheme. The Federation is encouraging its local associations to follow the example set.

NEW INTERNATIONAL ADVISORY SERVICE

A NEW service, Combined Engineering and Economic Studies, Ltd., was launched last week by Mr. Maxwell Stamp and Mr. Andrew Henderson, M.A., M.I.C.E., M.I.Mech.E. Using advanced engineering and economic techniques, this consulting service will survey engineering, economic and financial potential in any country, and examine projects and plans of different kinds.

Mr. Stamp, on announcing the new service, said: "Engineers and economists must get together and work together from the outset if they are to give adequate and complete professional advice to those responsible for development projects either at home or abroad. In other countries, these consulting services have been available for some time; in Britain they are rare or non-existent. If a foreign government wants independent advice on its project planning it has been necessary for it to employ non-British firms. Now we are hoping to fill this gap with C.E.S."

Mr. Stamp is a director of Philip Hill, Higginson, Erlangers, Ltd., the merchant bankers, and the De La Rue Co., Ltd., and Maxwell Stamp Associates, Ltd., economic consultants to industry.

Mr. Henderson is a partner of Livesey and Henderson, the consulting engineers. He was formerly engineer on Buenos Aires Great Southern and Western Railways, and only recently was a member of the Board of Trade Mission to Latin-America.

"MONEY FOR EFFORT"

Financial incentive schemes are regarded as effective means of increasing co-operation between workers and management. Yet the evidence suggests that their effectiveness is limited and that they are likely to be less widely applied as productive techniques improve.

This conclusion is contained in "Money for Effort" by Tom Lupton, which is No. 11 in the Problems of Progress in Industry series, published for D.S.I.R. by H.M.S.O. Price 1s. 9d., by post 2s. 1d. (U.S.A. 32 cents).

The author discusses the evidence that is available from studies of the working of incentive schemes over a number of years.

He shows that 33 per cent. of British workers are paid according to some kind of financial incentive, which is an increase of 4 per cent. since 1939. This relatively slow rate of progress may be interpreted as showing that increasing mechanisation is making incentive schemes redundant. Or it may be that they have already been applied to most of the tasks for which they are appropriate.

Whether incentive schemes can be made effective will, the author concludes, have to be assessed within a much wider framework of life both inside and outside the factory. The discussion indicates where further inquiries may increase understanding of the problems of co-operation between workers and management. Financial incentives may be an important aspect of these researches.

BUILDING TECHNICIANS DIARY

The 1962 edition of the Building Technicians' Pocket Diary is now available from the Association of Building Technicians, 156 Waterloo Road, London, S.E.1.

All the well-known features of earlier editions are retained: maps, calendars, ruled graph paper and memorandum paper. The technical section of 160 pages contains up-to-date information of measuring, planning and structural engineering, and data on all the trades — bricklayer, carpenter, concreter, drainlayer, etc. There is a summary of important legislation and a directory of journals and organisations, and space is provided in which to note additional technical information.

Bound in rexine with a pocket at the back the diary is priced at 6s. 7d., or 8s. 2d. if bound in leather.

PART OF SEA BED RECLAIMED FOR STORE EXTENSION

PART of Falmouth Bay has been reclaimed by Bovis, Ltd., during the extension of the Market Street, Falmouth branch of Marks and Spencer. At high tides the sea covered the lower twelve feet of the scaffolding.

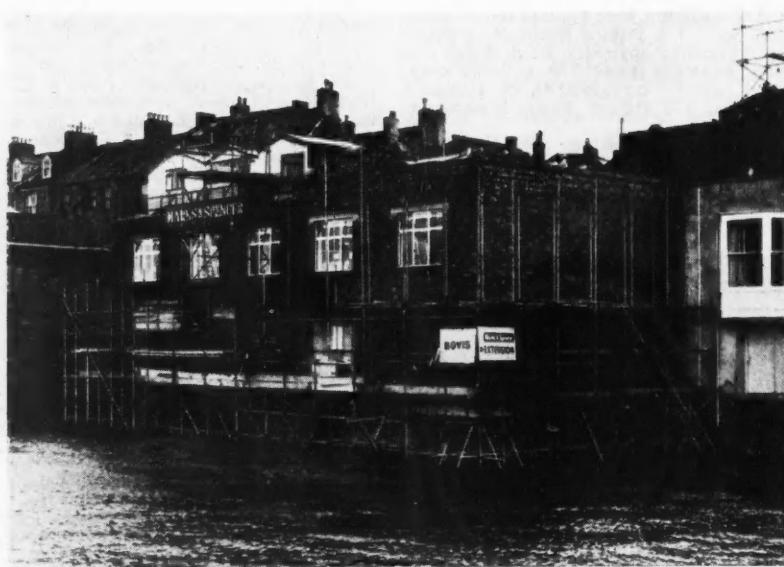
Although the reclamation was really a civil engineering project, Bovis decided to undertake the work after appraising all the factors of this difficult site. For similar reasons they also did their own demolition work on an ancient and massive brewery adjoining the existing store.

Work in Falmouth Bay began in November, 1960. An early suggestion of a cofferdam was rejected on grounds of

access prohibited the use of cranes and the heavy concrete shoring had to be man-handled into place on the sea bed 16ft. below.

While this work was in progress, the brewery at the front of the site was demolished. Here again, the narrowness of Market Street and the nature of the building presented problems. Blocks of granite weighing 30cwt. had to be removed and solid stone walls up to 2ft. in thickness demolished.

Despite these problems, a 1,600 sq. ft. two-floor extension was opened to the public recently and the remaining 2,700 sq. ft. of the contract is scheduled for completion early in 1962. The extensions



The extension seen from Falmouth Bay

its cost, which would have been about a third of the total contract.

Working during the two hours on either side of high tide once a day, the contractors erected prefabricated concrete shoring after first pressure water-jetting the sea bed to ensure good adhesion for the poured concrete. Men were frequently working waist-deep in water. Despite the hazards, there were no accidents during the sea wall operations.

A total area of 900 super. ft. was reclaimed from the Bay and this phase was completed in three months. Some 450 cu. yd. of hardcore and 120 cu. yd. of concrete were absorbed. The difficulties of

are to an existing sales floor area of 6,000 sq. ft. and will double the original frontage in Market Street.

Current work includes extension and modernisation of sales floor, stockrooms and staff quarters. The original sales floor was completely relaid with Semtex plastic tiles and a new suspended ceiling installed. Lighting throughout the store was also renewed. This work was done outside business hours to avoid inconvenience to the public. With the same object, work on the actual extensions has been screened off by weather- and dust-proof partitioning.

The architects for the scheme are Lewis and Hickey and the consulting engineers are D. W. James-Carrington and Partners.

8,000,000 HOUSES NEEDED IN 20 YEARS

IN his introduction to an Alliance Building Society booklet, "The Housing Land Crisis," Mr. Lewis C. Cohen, chairman and managing director, says that over the next 20 years 8,000,000 new houses must be built in England and Wales to meet expected demand.

Commenting on the shortage of building land the report says: "More intensive use of urban land will not solve the problem by itself. If the countryside within reach of the major conurbations of England and Wales is not simply to disappear, future development must be strictly controlled in compact areas. This means, therefore, that development must only take place by the planned expansion of existing towns and the creation of new towns—and cities, large enough to support the provision of

those commercial, educational, medical, and cultural services which are integral parts of modern urban life."

Land Prices

Reference is made to the high prices currently being paid for building land—particularly for flats—and examples are given of £23,000 per acre in Reading, £40,000 in Wembley and £48,000 in Worthing.

"The problem of increasing the supply of land for housing must be dealt with regionally," says the report. "Substantial further allocations of land for residential development must be made in South-East England and the Midlands immediately, and long-term plans made for ensuring a better balance in the distribution of population."

NEW INTERNATIONAL STANDARDS COMMITTEE ON CRANES

CONFICTING national standards for materials and equipment can be just as big a barrier to international trade as tariff walls. Nowhere is this more true than in the field of crane manufacture.

Most countries (including the U.K.) have standards for cranes, and at present difficulties arise with the export of cranes from one country to another due, in particular, to the varying methods adopted for rating cranes in respect of their safe working loads.

The first step towards unification of these conflicting standards has now been taken: the International Organisation for Standardisation has set up a new technical committee on cranes and excavators. This committee, which has just concluded its first series of meetings (held at British Standards House, Mayfair, London) is concerned particularly with terminology, load rating, materials, design, stability, testing and safety.

In the chair at the meeting was Mr. John Baker, chairman of the B.S.I. committee on cranes and derricks. Nearly 40 delegates, from Finland, France, Germany, the Netherlands, Poland, Portugal and the U.K. attending the meetings. The U.K. delegation being led by Mr. T. E. R. Torrance, chairman of the main technical committee of the Association of Crane Makers.

Definitions of Terms

Delegates were primarily concerned at this first meeting with reaching agreement on definitions of fundamental technical terms. In addition, they consider proposals made for a standard range of capacities for cranes; these will be further discussed at a future meeting.

Other matters to which the committee will give priority are: Stability requirements for cranes (including consideration of wind loads); testing procedures for cranes; crane ropes and associated pulleys, drums and so on; crane structures.

A working group was set up to draft proposals initially in respect of the first four of the subjects.

When they have dealt with these fundamentals, the committee are to consider the establishment of working groups to deal with builders' tower cranes, jib cranes, overhead travelling and bridge cranes, mobile cranes and single bucket excavators.

Works Visits

During the course of the meetings, delegates visited the Bath works of Stothert and Pitt, Ltd., where they saw some of the new methods of manufacture introduced for dock cranes, and K. and L. Steel-founders and Engineers, Ltd., Letchworth, where they saw power-driven mobile cranes being tested for stability, both in accordance with the requirements of B.S. 1757 and with the requirements which have been formulated by the Federation Europeene de la Manutention.

BOOKS RECEIVED

Cabma Register 1961-62 of British Industrial Products for Canada. Ninth Edition. Published jointly by Kelly's Directories, Ltd., and Iliffe Books, Ltd. Price 15s., post free.

The classified list of products consists of more than 3,000 British products available to the Canadian market, with their suppliers given under each heading. The French equivalents of these headings are set out in alphabetical order in a separate glossary. A directory of nearly 4,000 British firms gives details of their distribution arrangements in Canada. Proprietary names and trade marks are given in special sections which enable the Canadian buyer to identify products and their sources of supply. The six sections of the Register are easily identified by the slotted index and tinted paper.

FACTORY BUILDING FEATURES SERIES OF PRECAST R.C. FRAMES

TWO previously existing production units which were found to be uneconomically planned are now rehoused in a new factory erected at Watford for the Dennison Manufacturing Co., Ltd., paper converters.

In its new form, the factory comprises a large production block with smaller units—an office block, a canteen block, a store and bicycle shed—group on two sides.

The production block is a single-storey structure, rectangular on plan, housing two kinds of processing units—one for bulky raw materials and the other for finished goods. The floor area is 120ft. by 222ft., divided up into 15 bays each 40ft. by 44ft. 6in.

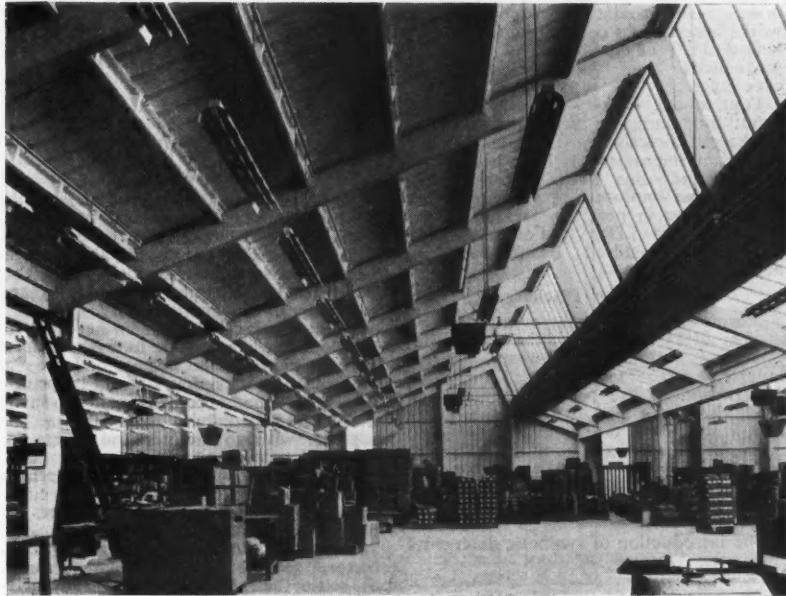
The block is constructed with a series

ported by 12in. square columns. The frames are linked by precast concrete purlins, roofed, apart from the glazing, with a double layer of insulated asbestos.

The external cladding to the frames is partly of brick, and partly of insulated asbestos, similar to the roof covering.

Office Block

The office block is placed at one corner of the main production area and consists of a simple but elegant two-storey building. The block has a precast reinforced concrete frame designed, for the most part, in bays approximately 16ft. square; the floors are of reinforced concrete slab construction. The frame is exposed externally and painted light grey on the verticals and dark grey on the horizontals. At roof



Interior view of the production block

of precast reinforced concrete frames. A modified form of northlight frame has been used to meet the very high daylighting requirements: an even, shadowless light is necessary for colour correction and very high speed colour printing. The traditional northlight frame would have caused too high a ridge, and this has been kept low by including an extra continuous strip of glazing in each frame, pitched at a 30 deg. slope.

The spacing and heights of the frames were dictated by the various machines in use, the minimum head clearance being 12ft. to the underside of the beams. Each frame is made up of 6in. by 16in. cranked beams spanning 44ft. 6in. between 12in. by 24in. main beams; the latter are sup-

ported by 12in. square columns. The frames are linked by precast concrete purlins, roofed, apart from the glazing, with a double layer of insulated asbestos.

The external cladding to the frames is partly of brick, and partly of insulated asbestos, similar to the roof covering.

Architects and Contractors

Architects for the scheme were Clive Pascall, Peter Watson and Associates—associate in charge: J. Stovold. The London Ferro-Concrete Co., Ltd., were responsible for the design and erection of precast concrete frames and the contractors were A. Monk and Co., Ltd.

FIRE-RESISTANCE OF FLOORS AND CEILINGS

EVERY day the Joint Fire Research Organisation receives inquiries from architects, consultants and local authorities on the best means of producing buildings to meet the fire regulations without using uneconomic methods of construction or having unnecessary restrictions placed upon them.

"Fire-Resistance of Floors and Ceilings" by G. I. Bird, B.Sc.(Eng.), M.I.Mech.E., (H.M.S.O. price 2s., by post 2s. 4d.) is the first in a new series of Fire Notes based on these enquires. It describes a series of large-scale tests which the J.F.R.O. at Boreham Wood, Herts., has carried out in connection with British Standard 476

which grades structural elements by their ability to perform the functions for which they were designed, when exposed to fire.

The booklet contains recommendations for achieving reasonable fire resistance in floors and ceilings, including the conversion of old buildings and the repair of buildings after a fire.

The Joint Fire Research Organisation is an organisation jointly run and financed by the Department of Scientific and Industrial Research and by the fire insurance companies who are members of the Fire Offices' Committee together with practically all the independent and mutual offices.

£820,000 HALIFAX FACTORY PROCEEDS

WORK has commenced on the erection of a large factory and administration block at Halifax for John Mackintosh and Sons, Ltd.

The contract consists of the erection of a production building approximately 500ft. long by 140ft. wide, the basement of which will be built inside a disused canal basin and will be of reinforced concrete. Over this is to be built a two-storey area at the north end to house a loading dock and production area at ground level with a canteen and kitchen on the first floor. There is, in addition, a single storey steel framed northlight production area 325ft. long by 125ft. wide and a three-storey steel framed structure 138ft. by 25ft. to the south.

An administration block will be approximately 180ft. by 40ft. by 50ft. high. This will be of reinforced concrete on piled foundations and will include the main entrance adjoining the existing office block, welfare office and laboratory.

Work also includes a single storey garage 156ft. by 50ft., also of reinforced concrete construction, with precast concrete portal frames on piled foundations. The garage will house washing bay, inspection bay, workshop and canteen.

Cost of the contract is estimated at £820,000. The architect is John Mathewson, A.R.I.B.A.; the consulting engineers are Frederick Snow and Partners; and the quantity surveyors are Bond Foster and Partners. Higgs and Hill, Ltd., are the main contractors.

COUNTIES TO COLLABORATE ON SCHOOL BUILDING

The counties of Shropshire, Gloucestershire, Hampshire and West Sussex have formed a consortium with the Ministry of Education to cut building costs and architects' time by co-operation and standardisation of building components. Dorset C.C. are also associated with the group, but are not yet members.

Mr. R. Crowe, county architect of Shropshire, who has been appointed chairman of the group's board of chief architects, said recently that they wanted to make the scheme sufficiently flexible to answer all planning problems, to serve the needs of architecture, and at the same time to gain the advantages of bulk buying. The consortium had agreed on a school building programme of more than £1 million for the coming financial year.

CRANE SIGNALS IN TRANSFER FORM

A transfer version of the standard system of crane signals for the constructional industries, published recently by the Federation of Civil Engineering Contractors and the National Federation of Building Trades Employers, has now been produced.

It is felt that one of the most suitable places for displaying the signals is the window of a cab, and the signals have been produced in the transfer form for that purpose. Copies are available from the Federation of Civil Engineering Contractors, price 6d. each.

The crane signals are also available in laminated plastic, the small pocket sized edition costing 9d. each, and the larger size for display costing 3/6d. each.

LOUGHBOROUGH CIVIC CENTRE DESIGN COMPETITION

Loughborough Borough Council have approved in principle a scheme for the construction of a new civic centre at Southfields Park at an estimated cost of £300,000. The existing town hall and town hall chambers are to be sold.

The scheme is to be the subject of a design competition, supervised by the R.I.B.A., with six premiums of £250 and a first prize of £750. It is anticipated that work will be started in 1964/65 and will be completed within two years.

LESS THAMES POLLUTION

Important Improvements in Progress

POLLUTION caused by material discharged into the Thames estuary is being substantially reduced at present and will be still further reduced by improvements to a number of sewage works which discharge into the estuary. Taken together the improvements ought by the end of 1962 to be enough to prevent offensive conditions in the tidal Thames, except possibly in the most unusual droughts.

This is one of the conclusions contained in the report* of a committee on pollution of the tidal Thames, presented recently to the Minister of Housing and Local Government. The committee under the chairmanship of Professor A. J. S. Pippard, has collaborated for 10 years with the Water Pollution Research Board of the Department of Scientific and Industrial Research in an investigation of the effects of heated effluents and other discharges into the tidal reaches of the Thames. A great deal of scientific information has been obtained which will be published separately by D.S.I.R.

The forecast is made possible by a new method of assessing the effect of any given effluent on the condition of the river, which is being developed by the Water Pollution Research Laboratory. The report says: "... the fact that such predictions can now, for the first time, be made, even with some reservations as to their accuracy, appears to us to point the way to the scientific control of pollution in the Thames estuary and in other estuaries sharing the same characteristics."

The Objective

When they were appointed the committee found the estuary to be in a badly polluted and frequently offensive state. Reviewing how far improvement is

* "Pollution of the Tidal Thames." Report of the Departmental Committee on the effects of heated and other effluents and discharges on the condition of the tidal reaches of the River Thames. H.M.S.O., price 5s. 6d.

reasonably practicable, they have concluded that it would be difficult to achieve more than an insurance against nuisance without "extraordinary measures at very heavy cost," which they think would be out of proportion to any likely gain. For example, to enable salmon to pass through the estuary it might be necessary, among other things, to treat sewage at some disposal works to a standard never yet reliably achieved anywhere. The committee therefore accepted as the objective the prevention of offensive conditions together with a margin of safety. They have concluded that current improvements to sewage works when completed should be enough to prevent objectionable smells in the river, but probably not enough to provide a reasonable safety factor. But—the report says—it would be premature to make recommendations for additional works which might cost millions of pounds before the predicted effect of these improvements has been checked by experience.

Four sewage works were responsible for about nine-tenths of the sewage effluent discharged directly into the tidal Thames. Important improvements have been made at these and other works at considerable cost. These improvement schemes, either completed or in progress, include one of £10m., another of £8m., and others running into several hundreds of thousands of pounds each.

Storm Water Discharges

Storm water discharges contributed an average of 1½ per cent. of the total pollution load entering the estuary. Direct industrial discharges accounted for about 9 per cent. of the polluting material in 1952/53, but the load attributable to these is now at about one-third of its 1953 level.

Sulphite discharged from the Battersea and Bankside power stations causes an appreciable loss of oxygen near these power stations, but has no material effect on the rest of the estuary.

The introduction of synthetic detergents

in and after 1949 was followed by a marked lengthening of the zone devoid of oxygen. The adoption of a new type of detergent which is being used experimentally may have beneficial results.

Additional heat discharges to the worst polluted reaches of the estuary should be avoided, say the committee, but discharges of heat at their present level would not seriously affect pollution if there were always some oxygen available in the water.

Individual Consideration

The committee recommended that new polluting discharges above Lower Hope Reach (below East Tilbury) should be avoided if at all possible, and even below this point proposals for new discharges should be carefully considered. All important effluents should, in future, receive individual consideration instead of having to conform to a general standard applied to all effluents in a particular stretch of the river.

The committee advise continued analysis of river conditions and recommend that the Water Pollution Research Laboratory should assess the situation in two or three years' time when the current improvement schemes have been completed long enough for their effects to be apparent.

TENDERING SYSTEM OPEN TO ABUSE

Speaking at the annual dinner of the Scottish Building Contractors' Association in Glasgow recently, Mr. Thomas S. Cordiner, president of the Royal Incorporation of Architects in Scotland, said that many parts of Glasgow were shabby and unworthy of an important city.

Glasgow was certainly in need of redevelopment, he stated, but where local authorities wished to dispose of large and valuable sites for redevelopment by private enterprise it had become common to invite developers to submit bids for a site together with an architectural design for the proposed scheme.

This method of tendering was open to serious abuse and seldom yielded either the best possible financial results or the best possible development. A local authority should either approve an architectural scheme and invite tenders for it, or settle their financial terms and invite developers to submit architectural schemes.

The toast of "The Association" was proposed by Mr. Marcus Clements, chairman and managing director of the Caterpillar Tractor Co., Ltd., and was replied to by Mr. Harold A. Whitson, who presided.

Other speakers included Mr. G. Gibbs, vice-president, Mr. D. Wardhaugh, chairman of the Scottish Branch of the Royal Institution of Chartered Surveyors, and Mr. Alister D. Ogilvy, chairman of the Scottish Section of the Federation of Civil Engineering Contractors.

HIGGS AND HILL AWARDED £912,000 CONTRACT

Higgs and Hill, Ltd., London, S.W.8, have been awarded a £912,000 contract for the erection of new offices at Gipsy Patch Lane, Filton, Bristol, for Siddeley Engines, Ltd.

The buildings, work on which commenced recently, consist of general offices of two, three and four storeys, and single-storey drawing offices. The general offices are part reinforced concrete framing and part load-bearing external walls. The internal walls are of concrete framing and suspended precast floor units.

The drawing offices have reinforced framing of heavy construction and north-light roofs. Plenum air-conditioning is to be installed in these offices.

The architects are Matthews and Son, 91 Gower Street, London, W.C.1, and the quantity surveyors are C. E. Ball and Partners, 19 St. Stephens Street, Bristol, 1. The structural engineer is A. E. Beer, 96 St. Georges' Square, London, S.W.1.



An interior view of the new church

DECORATIVE USE OF STRUCTURAL STEELWORK IN LONDON CHURCH

STRUCTURAL Steelwork has been used both decoratively and functionally in the recently completed St. Michael's R.C. Church, East Ham, London, providing a new note in church design.

The architects, Burles and Newton, 26 Great James Street, W.C.1, have allowed the free-standing structural steel roof frames to form the basis of the pleasing triangulated building design.

The steelwork comprises three pinned arches and each half of the arch consists of rafter and stanchion, both fabricated from 12in. x 5in. rolled steel joists, which were splay cut along the web, turned end for end and then welded to form tapering joist section. Both the rafter and the stanchion form one rigid unit 15in. deep tapering at both the base and the ridge to 9in. deep.

Sanders and Forster, Ltd., Bridgwater House, Warton Road, Stratford, E.15, designed, fabricated and erected the steelwork. The general contractors were J. and R. Rooff, 679 Barking Road, E.13.

International Construction**METHODS OF HOUSING CONSTRUCTION IN SWEDEN**

AT the invitation of the Joint Committee on Structural Concrete, Mr. Bengt Axelson, deputy chairman of the Swedish Society of Civil Engineers, spoke in London last week on methods of housing construction in Sweden.

He said that as in many other European countries, there is a very considerable housing shortage in Sweden, in spite of the fact that intensive building activity is going on, and has been going on for some time.

The main reasons for this are the migration of people from the country to the towns, and a rising standard of living which has led to a demand for larger and better housing.

The building situation is dominated by the fact that in Sweden, a country of full employment, man-power is scarce, wages are high—and the housing is needed quickly. To meet this situation the building industry has rationalised and mechanised itself to a high degree and many systems of prefabricated building are now in use in that country, all designed to reduce man-hours on the site and speed up the work.

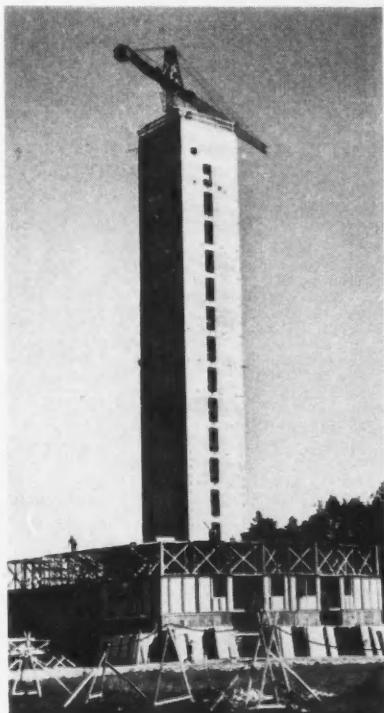
Main Methods

After outlining financing methods in Sweden—subsidies, loans, etc.—Mr. Axelson proceeded to describe the main building methods in use in his country. Most of them have been developed by the building contractors in close co-operation with a few important manufacturers of building materials, consulting engineers and architects.

Methods described included the "Skarne" system, the basis of which is an in-situ concrete tower, placed with sliding formwork, which is constructed first and forms a central core around which the rest of the building is constructed. This core becomes a stabilising element of the building and contains all the services, stairs and lifts which are erected by crane, and in-situ floors; the internal walls are in general load-bearing and the external walls, often made of "Siporex" slabs, are non-load-bearing.

Another system is the "All-Concrete" system, which consists of a monolithic arrangement of in-situ concrete cross-walls and floors, the interesting thing about

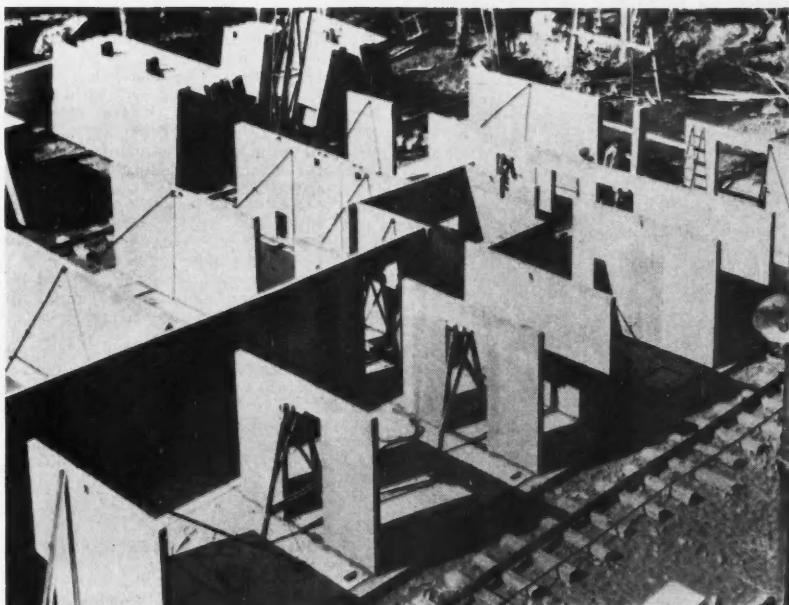
this system being the prefabrication of the formwork, which is made up in wall-sized panels consisting of two leaves with a platform at the top from which the operative pours the concrete. These panels which are easily removable, are positioned by



Flats at Nasbydal, north of Stockholm, constructed by "Skarne" system

crane; floors are similarly cast with prefabricated forms on retractable legs.

The "Sundh" system is based on wall-sized precast slabs comprising two leaves of concrete with insulation between;



Room size walls under erection (Uppsala)

bathrooms are precast as a complete box with provision for plumbing and services.

In another system, used for single-storey houses built with prestressed concrete frames and walls of "Siporex" lightweight concrete panels, the building is centred round a "heart" consisting of a fully equipped kitchen, bathroom, lavatory and boiler room assembled together in a concrete "box" of walls, floor and ceiling. This unit is delivered ready for installation, with finishes applied and wiring and plumbing ready for connection.

Mr. Axelson illustrated his lecture with many slides of building sites around Stockholm, giving an impressive picture of the Swedish achievement to date, and ended with a forecast of possible future developments.

DECREASE IN SOUTH AFRICAN BUILDING PLANS

From South Africa, Barclays Bank D.C.O. report that conditions in the building industry are still much the same as those experienced over the past few months.

A decrease of R26.2 million to R60.6 million in the value of building plans passed in the 18 principal urban areas of the country during the first eight months of this year (by comparison with the similar period in 1960) is shown in the latest figures released by the Bureau of Census and Statistics.

The total for August, 1961, alone—at R7.1 million—was some R1.6 million less than that recorded in August last year. The reduced programme for 1961 has affected virtually all types of structure, residential as well as non-residential, with the exception of factory buildings.

The Bank add that the Minister for Labour recently revealed that between June 30, 1961, and August 11, 1961, building contracts to the value of R3.6 million were accepted through the Department of Public Works, and he has forecast that during the next six months further contracts to the value of R6 million will be put out to tender.

The Minister also mentioned that the National Housing Commission has recently given out over 600 contracts which together with the other projects should provide a considerable stimulus to the country's building industry.

GLANDLESS PUMPS FOR EXPORT

Machinimport, Moscow, have ordered from Hayward Tyler and Co., Ltd., one of the Stone-Platt group of companies, four high-pressure glandless motor pump units. Two are of 650 h.p. and two of 300 h.p. operating at 2,840 p.s.i. system pressure.

From Italy has come a further order for three 200 h.p. glandless units for a power station in Sicily.

Four 375 h.p. high pressure glandless units have also been ordered by the Japanese for installation in the Karita Power Station of the Kyushu Electric Power Co.

The value of these contracts exceeds £100,000.

U.S. FIRMS GET £16.7M. SNOWY MOUNTAINS CONTRACTS

Three American companies have been awarded contracts totalling £16,710,000, for the next major stage of the Snowy Mountains hydro-electric scheme on the border of New South Wales and Victoria.

Two of the contracts are for a 15-mile tunnel and the third for a concrete dam and a three-mile tunnel. Eleven companies from France, Australia, Britain, Canada, Italy and the U.S. tendered, the successful firms being Utah Construction and Engineering Proprietary, Brown and Root, and Sudamericana.

FOR THE DIARY

Nov. 2

The House-Builders Conference at the Connaught Rooms, London, W.C.2.

Institution of Civil Engineers, Great George Street, London, S.W.1. Informal discussion on "Foundation Design and Construction", introduced by D. J. Henkel.

Meeting of the London branch of the Contractors' Mechanical Plant Engineers, Red House Hotel, Redbridge, Wanstead, 7.30 p.m.

Nov. 3

Annual dinner of Mid-Southern branch of the Contractors' Mechanical Plant Engineers, Red Lion Hotel, Henley-on-Thames, 7.30 p.m.

Presentation of L.M.B.A. Medals by Field Marshal The Viscount Slim, K.G., at Fishmongers Hall, at 3 p.m.

Meeting of the Institution of Highway Engineers at 11 Upper Belgrave Street, London, S.W.1, 5.30 p.m. "The Economic Justification of Roads," by C. T. Brunner.

Nov. 7

Institution of Civil Engineers, Great George Street, London, S.W.1. Presidential address by Sir George McNaughton.

Meeting of the Manchester and District branch of the Contractors' Mechanical Plant Engineers, Woodcourt Hotel, Brooklands Road, Sale, 7.30 p.m.

Nov. 8

Meeting of the Reinforced Concrete Association at the Royal Society of Arts, John Adam Street, London, W.C.2. "Shrinkage and Creep in Concrete," by A. M. Neville. Meeting is to be preceded at 5.45 p.m. by an extraordinary general meeting to consider resolutions amending the Memorandum and Articles of the Association.

Meeting of the Glasgow branch of the Contractors' Mechanical Plant Engineers, More's Hotel, India Street, Glasgow, 7.30 p.m. Film show by Chaseside.

Nov. 10

Scottish Motor Exhibition, Kelvin Hall, Glasgow, Nov. 10-18.

Dinner dance of the Yorkshire branch of the Contractor's Mechanical Plant Engineers.

Nov. 13

Factory Equipment, Heating, Ventilation and Thermal Insulation Exhibition, Earls Court, London, Nov. 13-18.

Annual dinner of the Lighthouse Club, Grosvenor House, London.

Nov. 15

Building Exhibition, Olympia, London, Nov. 15-29.

Meeting of the South Western branch of the Institution of Highway Engineers at Imperial Hotel, Exeter. "Quarries and their Relationship with the User," by J. S. Bent. Royal Society of Arts, John Adam Street, London, W.C.2, 6 p.m. Paper "Engineering and Architecture" by Prof. Ing. Riccardo Morandi. Ticket applications to Secretary, R.S.A.

Nov. 20

L.M.B.A. President "At Home" at the Building Exhibition, 3.30 p.m.

Nov. 21

Annual banquet of the National Federation of Roofing Contractors, Grosvenor House, London.

Annual dinner of the quantity surveyor members of the Royal Institution of Chartered Surveyors, Grosvenor House, Park Lane, London, 7.30 p.m.

Nov. 22

Annual general meeting of the National Federation of Roofing Contractors, London.

Nov. 23

Meeting of the County of London branch of the Faculty of Building at the Building Centre, Store Street, Tottenham Court Road, 7 p.m. Debate on the motion: "That This House Approves the Minute of the Joint Consultation Committee that Paid Meal Breaks Should not Exceed One Hour per Day."

Nov. 24

Meeting of the Midlands branch of the Contractor's Mechanical Plant Engineers, Wilson Arms, Knowle, 7.30 p.m. Film and Lecture, by R. Bigwood, British Lift Slab, Ltd.

Nov. 25

Annual dinner of London branch of the Institution of Plant Engineers, Waldorf Hotel, London.

Nov. 28

Mid-Southern branch of the Contractors' Mechanical Plant Engineers, Brains Trust, Grosvenor Hotel, Caversham, Reading.

Nov. 29

Conference on "Oil Hydraulic Power Transmission and Control" at the Institution of Mechanical Engineers, 1 Birdcage Walk, London, S.W.1, Nov. 29-30.

Nov. 30

Annual dinner and dance of the Institution of Water Engineers, Park Lane Hotel, London.

Annual dinner and dance of the Derbyshire branch of the Contractors' Mechanical Plant Engineers, Victoria Restaurant, Chesterfield.

Dec. 1

Winter general meeting of the Institution of Water Engineers, at Institution of Civil Engineers, London.

Dec. 4

Royal Smithfield and Agricultural Machinery Show, Earls Court, London, Dec. 4-8.

Dec. 5

London Master Plasterers Association annual dinner and dance, Grosvenor House.

Dec. 7

Annual dinner and dance of the Midland branch of the Contractors' Mechanical Plant Engineers, Town Hall, Sutton Coldfield.

Meeting of the London branch of the Contractors' Mechanical Plant Engineers, Hendon Way Hotel, Hendon Circus, N.W., 7.30 p.m.

Dec. 8

Federation of Master Builders' London Region "Ladies Night," Grosvenor House, London, 6.30 p.m.

Dec. 12

London Association of Master Stonemasons, bi-annual dinner and dance, Park Lane Hotel.

Dec. 14

Stag dinner of the Yorkshire branch of the Contractors' Mechanical Plant Engineers.

Dec. 20

The Institute of Sewage Purification—Metropolitan and Southern Branch symposium on the treatment of industrial and sewage sludges at Friends House, Euston Road, London, N.W.1.

Jan. 23

L.M.B.A. annual general meeting and lunch, Park Lane Hotel.

Jan. 26

London Master Plasterers Association annual general meeting, Charing Cross Hotel.

BRITISH STANDARDS

Mild Steel for General Structural Purposes (B.S. 15 : 1961)

One of the first ever British Standards was B.S.15—published in 1906—dealing with mild steel for general structural purposes. In line with the British Standards Institution's policy of keeping standards up to date, new editions have been published from time to time, and a fifth edition (B.S.15:1961) has just been announced.

Apart from changes in the method of presentation to bring this latest edition in line with modern practice, a number of important changes of a technical nature have been incorporated.

Since the previous edition was published in 1948 there have naturally been developments in steelmaking, particularly in the application of oxygen. Provision has been made for these new developments—subject to precautions being taken to safeguard the purchaser against material which does not conform to the sense of the standard. Furthermore, the steel now specified has a maximum carbon content of 0.25 per cent., and is suitable for welding.

This edition specifies the process of manufacture and lays down limits for carbon, copper, sulphur, and phosphorus. It also specifies the tests to be carried out on plates, sections and round and square bars together with the special tests required on rivet bars and rivets. Price 5s. each.

Copies of this British Standard may be obtained from the British Standards Institution, Sales Branch, 2 Park Street, London, W.1.

CONSULTANTS' CHANGE OF ADDRESS

A. B. Mallinson and Co., consulting engineers, have moved their offices to Cornbrook Place, Manchester, 15. Tel.: Trafford Park 0264.



This Whitlock D-D 70 dumper was seen recently at the Lee Moor Pit, Devon, of English Clays Lovering Pochin and Co., Ltd. The D-D 70 was being demonstrated for the first time at a china clay pit by William R. Selwood, Ltd.



A "BROOMWADE" Type WR.120 Rotary Air Compressor, delivering 125 cu. ft. of free air per minute at 100 p.s.i. normal working pressure, at work on the new bridge at Laira. (By courtesy of Pannell (Plant) Limited, Torre Hill, Plymstock, Plymouth. The City Engineer, Plymouth Corporation, The Guildhall, Plymouth. The Site Agent, Messrs. Marples Ridgeway & Partners Ltd., Laira Bridge Contract, Plymouth.)

BREAKING THE BOTTLENECKS



"BROOMWADE" at Laira, Plymouth

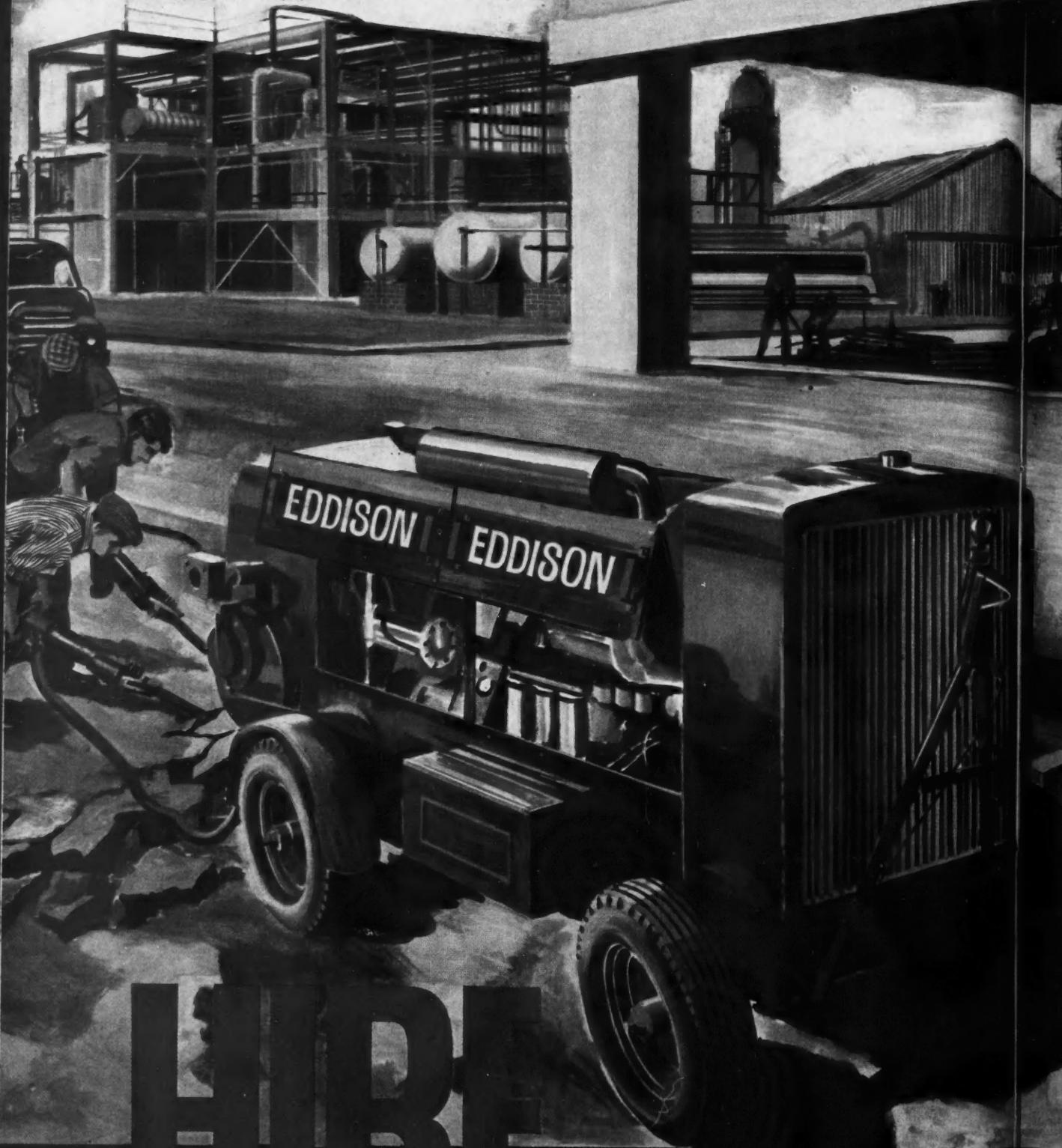
A new bridge is being constructed over the river Plym at Laira, Devon, to replace a century-old cast iron structure. This new bridge will break a notorious bottleneck on the Plymouth-Kingsbridge road.

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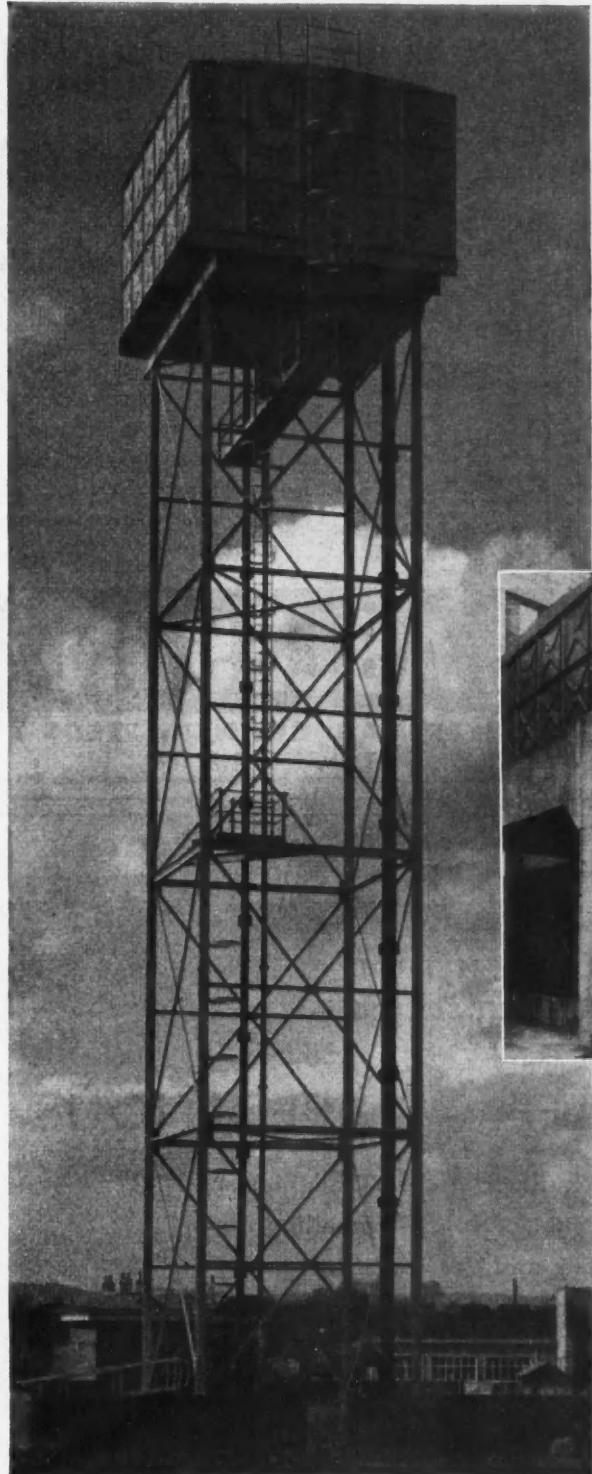
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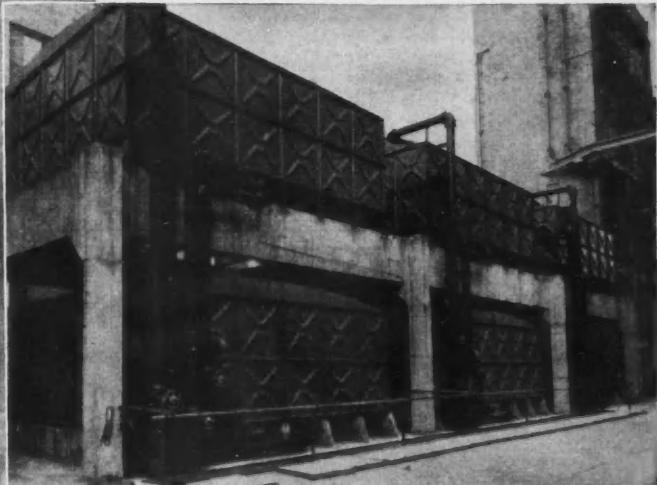
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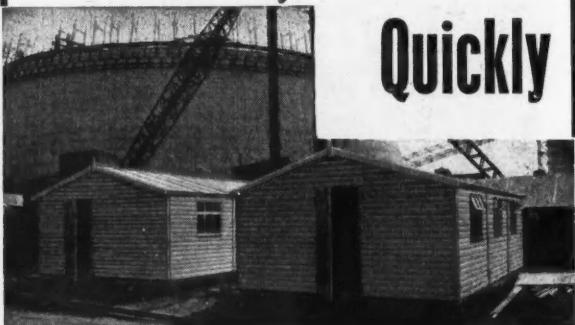
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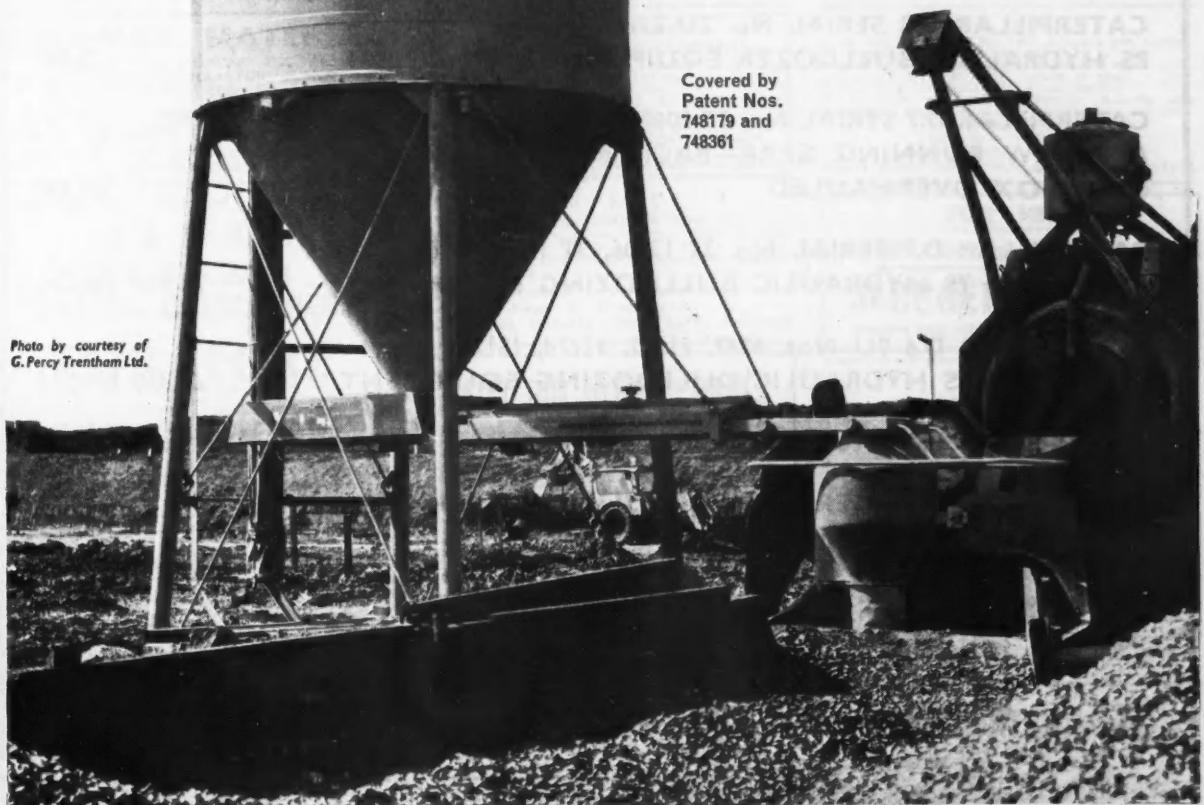
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(Continued from page 21)

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approximately

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RUSTON BUCYRUS "10 R.B. and 19 R.B." EXCAVATORS, RANSOMES AND RAPIER "410" EXCAVATOR, CATERPILLAR "D.7 and D.8" TRACTORS, SCRAPERS, MOBILE CRANES, CURRAN 60-ton TRAILER MOUNTED CRANES, 50 A.E.C. "MATADORS," DOUGLAS "TUGMASTER" TRACTOR, BARBER GREENE DITCHER, FORKLIFT TRUCKS, SNOW PLOUGHS, DAVID BROWN "TASKMASTER" TRACTORS, ELECTRIC FACTORY TRUCKS, also

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For Locations, Viewing Dates and Times see Page 5 in Catalogue.

CATALOGUE: Price 1/- (P.O.'s only) may be obtained from the 3rd November onwards from the Auctioneers' Offices, Dept. 3, 5 Byard Lane, Nottingham. Telephone: Nottingham 54272 (7 lines).

THE CONTRACT JOURNAL

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FOR SALE.
 One Caterpillar D4, 2T Series, L.P.C. Dozer and Winch, £875.
 One Hanomag K90, base machine and Winch, 1954, £1,100.
 One Caterpillar HT4 SHOVEL, with Ripper and Blade, £2,250.
 One Priestman Wolf 111A, 6000 Series, Skimmer/Backacter, £1,400.
 One Priestman Wolf 111A, 7000 Series, Skimmer/Backacter, £1,850.
 One Smiths Super 10, 1800 Series, Skimmer/Backacter, £1,500.
 One Neals 2-ton CRANE, Tyne N, ex Council, 1951, £675.
 One Le Tourneau 12ft. Tandem SHEEPSFOOT ROLLER, £425.
 One Blaw Knox 12ft. SHEEPSFOOT ROLLER, unused, £525.
 One Euclid S7 Motorised SCRAPER, 7 cu. yd., 1958, £250.
 One Le Tourneau Model X SCRAPER, 4 cu. yd., £275.
 One Blaw Knox 12ft. SCRAPER, unused, £2,500.
 One Blaw Knox 9 cu. yd. SCRAPER, unused, £2,200.
 One Walls and Steevens 3-ton ROLLER, Petrol, £225.
 One Aveling-Barford 3-ton ROLLER, ex Council, £495.
 One Dixon 25/30cwt. ROLLER, Petrol, electric start, £250.
 One Neals 1-ton DUMPER, Petrol, £275.
 One Clipper Sawmashine SAW, little used, £700.
 One Allen-Parsons 12/21 TRENCHER, 15in. Buckets, Diesel, £1,100.

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FOR SALE.

10RB, 9295 Series, Dragline, 3VRON, pistons and liners, slewing rollers. Reconditioned tracks and bottom rollers. £750.

HD6 1956 TRACTOR SHOVEL, with cab. Pistons and liners, reconditioned tracks, new bottom rollers. £2,000.

Telephone: Viking 2486.

JOHN DEERE 1 cu. yd. CRAWLER LOADERS available, LONG or SHORT HIRE. Keen rates.

RINGWAY CONTRACTORS, LTD., Horsforth 4805.

WANTED TO PURCHASE. Hyster ROLLER.

Write Box P.5100, "The Contract Journal."

ERNEST DOE AND SONS, LIMITED.

All the machines shown in this advertisement are our own property and can be seen either at Utting or Croydon, or demonstrated on your own site, the best of their kind in their price ranges.

1955 J.C.B. DIGGER, two Buckets, Front Shovel, over-hauled, warranted, £850.

1955 J.C.B. DIGGER, 24in. Bucket, Counterweight, £450.

1956 J.C.B. Hydra-Digga, with Dozalode Front Shovel, £2,840.

1958 J.C.B. Hydra-Digga/Loadall 65, two Buckets, rebuilt, warranted, £1,750.

1959 J.C.B. Hydra-Digga/Loadall 65, two Buckets, overhauled, throughout, £1,850.

1960 J.C.B. 4, with 7 cu. yd. Front Shovel, £1,950, plus Buckets.

1961 J.C.B. 4, demonstration machine, £2,550, plus Buckets.

New J.C.B. 4 Hydraulic EXCAVATOR, two-lever, £2,840, plus Buckets.

1955 Dinkum DIGGER, with Bucket and Front Shovel, rebuilt, guaranteed, £750.

Fowler VF, with Bay Angledozer, very good tracks, £350.

Air Pumps 2-tool COMPRESSOR, on pneumatics.

Dorman Diesel Engine, good order, £350.

Air Pump COMPRESSOR, similar to above but needing repairs, £145.

G.F. 1/2 cu. yd. Diesel DUMPER, 4-wheel, good order, £85.

1959 Rotary Hoe Super TRENCHER, as come from work, £1,000.

1955 Dinkum Rotary Hoe TRENCHER, straight from work, £475.

Thwaites 15cwt. DUMPER, Petter Diesel Engine, all in good order, £110.

1960 J.C.B. 303 7/8 cu. yd. Hydraulic LOADING SHOVEL, as new, £1,350.

1959 Cheshire 800TC Hydraulic LOADING SHOVEL, £1,450.

1958 Thwaites 1-tonne Orion Diesel DUMPER, over-hauled, £310.

Stothert and Pitt 10/7 MIXER, £65.

Bray BL30 1 cu. yd. Hydraulic LOADING SHOVEL, overhauled, £1,050.

1957 Bray BL25 Crawler LOADING SHOVEL, overhauled, £1,250.

Onions No. 5/8 C.C.U. Double Drum Cable WINCH, new condition, £250.

Le Tournes Double Drum WINCH for D4, £150.

Buckeye Double Drum WINCH, £75.

Blaw Knox 4 cu. yd. SCRAPER, in good order, £285.

Onions 6yd. Empire SCRAPER, very good order, £395.

Drayton 3-wheel DUMPER, ideal for confined spaces, £250.

1958 Ferguson 35 Diesel TRACTOR, with Shawnee Heavy Duty Front Loader, £550.

1959 J.C.B. Loadall 75, 7/8 cu. yd. Hydraulic Loading Shovel, with Crowd Action Bucket, £1,250.

ERNEST DOE AND SONS, LTD.

Industrial Division, Utting, Essex.

(Hatfield Peover 311; (night) 319); Therapia Lane, Mitcham Road, Croydon, Surrey (Thornton Heath 4844 and 4095).

FOR SALE. HT4 Caterpillar TRAXCAVATOR, 1 1/2 cu. yd. Bucket, recently completely overhauled by Levertons, £2,100 o.n.o. — Write: THE DON CONSTRUCTION CO., LTD., 45a Market Place, Doncaster.

FOR SALE. One Whitlock Dinkum Mk. III DIGGER for County Crawler, in perfect order, £250. PLANT REPAIRS (BRISTOL), Fox Road, Bristol, Z.

ROWLEY PLANT CO., LTD. offer subject to remaining unsold the following:

DUMPERS: Three 4 1/2 yd. Aveling-Barford DUMPERS, 1955/56, fitted Dorman 4BK2 (electric starting), Cab, £2,200 each.

One May 1958, Cheshire Ant 30cwt. Diesel DUMPER, fitted Petter AVA2 Engine, fully reconditioned and repainted, £285.

EXCAVATORS: One 10RB Excavator, 17520 Series, fitted Backacter, £1,250.

One Allen Atos Digger, No. 47709, in very good condition and on good tyres, complete with 24in. Excavating Bucket, £115 o.n.o.

One 1955 Priestman Wolf Excavator, Series 7000, Dorman Diesel Engine, Skimmer/Backacter Equipment, first-class condition, Inspection invited, £1,500.

One 1954 Smiths Super 10, Skimmer/Backacter Equipment, powered by Gardner Diesel Engine, good condition, £1,150.

One 1953 Priestman Wolf 3A, Skimmer/Backacter Equipment, Dorman Diesel Engine, good working condition, Inspection invited, £1,000.

MIXERS: Two 10/7 Winget Mixers, c/w Dragfeeder, new Petter Diesel Engine, £200 each.

Several Winget 5/31/2 Diesels, £75 each.

One 10/7 Winget Mixer, Petter Diesel, 1952, £75.

COMPRESSORS: One 1953 Consolidated Pneumatic Compressor, 210 c.f.m. capacity, four pneumatic tyres (new), powered by Ruston 4VRH, £385.

ROLLERS: One 9 1/2-ton A/B Roller, new 1959, c/w Cab, lights, 3-ton Scrapper, Torque Converter and Hydraulic Steering, Water Tank and Spray Bars, £3,250.

One 7 1/2-ton A/B, new 1956, c/w Cab, lights, Hydraulic Scrapper, Hydraulic Steering and Torque Converter, Water Tank and Spray Bars, £2,300.

One 6 1/2-ton A/B Diesel Roller, 1955, c/w Cab, Water Tank, Spray Bars, £1,675.

One 3-ton CFW A/B Roller, Cab, Water Tank, Spray Bars, 1957, £750.

One 50cwt. Wallis-Stevens Roller, petrol, good order, £195.

Three 30cwt. A/B GA Rollers, petrol, c/w Water Tank and Spray Bars, 1948 to 1952, from £175 each.

One A2½ A/B Petrol Roller, complete, Water Tank, Spray Bars, in good running order, £150.

One 28W Stothert and Pitt Vibrating Roller, Water Tank and Spray Bars, £175.

BARBER-GREENE: One No. 879A Senior Spreader, powered by Ford 4D, 1954, new tracks, good order, £2,650.

OVERLOADER: One No. 1959 Bristol Overloader, good working order, £850.

ROWLEY PLANT CO., LTD. Beddington Lane, West Croydon. Telephone: Thornton Heath 5634-5-6.

FOR SALE—ALL EX STOCK. 22RB, No. 7022, with Shovel, £3,500.

10RB, No. 4449, Skimmer/Backacter, £2,000.

10RB, No. 19286, Skimmer/Backacter, £1,700.

Mk. V Priestman Cub, No. A8764, Skimmer/Backacter, new late 1958, £1,550.

Mk. V Priestman Cub, No. A9114, Skimmer/Backacter, new 1959, £1,650; with Dragline, £2,000 wanted.

10-ton Huber ROLLER, first-class condition. Offers wanted.

First item ex stock Northern Ireland.

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Rollers 2½-10 Ton

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PLANT AND MACHINERY WANTED—FOR SALE—FOR HIRE

VALES PLANT REGISTER, LTD.
OFFER FOR IMMEDIATE SALE:
CRANES:

NEALS 2-ton NM DIESELS. 20ft. Jib, pneumatics, good condition, £1,200.
ANDERSON 3-ton Single-motor ELECTRIC DERRICK, 90ft. Jib, good condition, £1,100.
JONES SUPER 40 3-ton MOBILE, Diesel, 30ft. Jib, Swan Neck, very good condition. Price on application.
STAFFS 3-ton MOBILE, Standard Jib, July, 1957, good condition, £1,350.
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BUTTERS 5-ton ELECTRIC DERRICK, 120ft. Jib, new 1951. Good, very good condition, £3,350.
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BUTTERS 7-ton 2-motor ELECTRIC DERRICK, 120ft. Jib, overhauled, £4,350.
ANDERSON 9-ton Single-motor ELECTRIC DERRICK, 100ft./120ft. Jib, 1940, £2,500.
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REICH 20/1300 TRAVELLING TOWER CRANE, 3-ton capacity, 1955, £1,450.
Six WEITZ G10HV TOWER CRANES, 49ft. Jib, 69ft. 6in. height of lift, unused, £1,600 each.
MORRIS 15-ton O.E.T., 53ft. 6in. span, good working order. Offers.
SMITH 3-ton O.E.T., 34ft. 8in. span, good working order. Offers.
VAUGHAN 20-ton O.T.C., 31ft. 7in. span, hand operated, good working order. Offers.

FOR SALE—A COMPREHENSIVE LIST OF PLANT FOR SALE AND HIRE—SEE FOR VALES FREE PLANT REGISTER.

Further details: 14 Lower Grosvenor Place, London, S.W.1. VICTORIA 7531, 3501, 8080, 9886 (15 lines).

FOR SALE:

Two Sykes 4in. Lift and Force PUMPS, no hoses, Petter Diesel Engines, £75 each.

TD14 TRACTOR, No. 26937, with Dozer, P.C.U., £1,200.
Ransomes and Rapier 2½yd. TRUCK MIXER, in 7-ton Bedford Short-wheelbase Chassis, new August, 1957, £1,000.

Appy TILBURY CONSTRUCTION CO., LTD., Ruscombe Works, Twyford, Berks.

FOR SALE. 38RB, long and wide, with 45ft. Dragline Equipment. This machine can be supplied with long Jib for crane work if required.—ROADS AND RUNWAYS (PLANT HIRE), LTD., 26 Victoria Street, S.W.1. Tel: Abbey 4905 (8 lines).

TYRES for SALE.—New 1100 x 20 (12-ply) TRACK GRIP Tires, £250 each, including carriage. FELTHAM RUBBER COMPANY, Green Man Lane, Feltham, Middlesex. Feltham 4121.

FOR SALE. 6,000-lb. capacity Diesel - driven Conveyancer FORKLIFT TRUCK, 9ft. lift. WILLIAMS SEARCH, LTD., Whitehall Road, Leeds, 12. Tel: 639081 (10 lines).

AXWORTHY OFFER FOR SALE:
Anderson-Grice 7-ton DERRICK CRANE, single-motor (electric), 120ft. Jib, Bogies available. Excellent condition.

BUTTERS 10-ton DERRICK CRANE, single-motor (electric), 120ft. Jib. Very good condition. Shawnee Pool REAR DUMP WAGONS.

Continental CD72 TRACTORS, with Angledozer, £750 each.

Onions 20 cu. yd. SCRAPPERS, good, £1,750 each.

Lorain MCS and Payne 10-ton TRUCK CRANES.

Cole 5-ton to 40-ton TRUCK CRANES.

Chasefield 700 DREDGING SHOVEL. Done 600 hours.

Broadbent 36 x 24 CRUSHER. No motor.

Parker Kubel 3-ton CRUSHERS. Choice of three.

Kennedy 14 Gyrotary CRUSHER. 165-h.p. Ruston and Hornsby LOCOMOTIVE, standard gauge.

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New 1956.

Broomwade 3003 COMPRESSOR, Meadows Diesel.

Very good.

Broadbent 10 Portable CRUSHING AND SCREENING PLANT. (Scotland).

AXWORTHY AND COMPANY, LTD.

(Drott for Hire).

Straight Road, Old Windsor, Berks.

Telephone: Windsor 3434 and 3384.

Telexgrams: Axworthy, Windsor.

FOR SALE:

43RB EXCAVATOR, No. 15966, complete with Dragline and 56.260.

38RB EXCAVATOR, No. 19465, with Dragline and F/S £8,250.

Smith 21, Serial No. 20282, Dragline or F/S, £2,250.

DB 2U, 16000 Series, fitted Birtley Cable Blade and Caterpillar Winch, £2,850.

D4 3100 Series, fitted Hydraulic Blade and Le Tourneau Winch, £650.

Le Tourneau 9 cu. yd. LS SCRAPER, good tyres, £460.

Le Tourneau 6 cu. yd. SCRAPER, £200.

Three Euclid ST MOTORS SCRAPPERS, new 1957, £8,500.

Cole 5-ton MK. 2 Diesel CRANE, £2,100.

Sheepson ROLLER, Double Drum, £225.

Broomwade Stationary AIR COMPRESSOR SET, 400 cu. ft., Model EH245, 400/3/50 Electric

Motor, 90-h.p., new 1958, £850.

WALKER AND PARTNERS, LTD.,

23 Claremont Crescent, Sheffield, 10. Phone 62428-9.

FOR HIRE:

Latest type CONCRETING PLANT, capable of 1120 cu. yd. per hour output, comprising Blaw Knox CONCRETE Batching and Mixing Plant.

A.B.G. CONCRETE LEVELLER AND FINISHER and FLEET OF THREE-WAY TIPPING LORRIES.

Plant may be hired in separate units or in block.

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MARTIN COWLEY, LTD.,

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CONCRETE MIXERS for SALE—15, 10/7, 14/10

18/10 and 21yd. Winget, Stothert and Pitt, Rex, Millars, Ransomes and Rapier, and Benford, tilting and closed drum types. Petrol, diesel and electric driven. Some with Built-in Weighers, Draglines and Dalli Scrappers. 50 available. From £35 each.

W. V. DAVIES, Concrete Mixer Service, Shipston-on-Stour, Birmingham. Sheldon 2424.

BUILDMASTER 50T TOWER CRANE for SALE, with 88ft. or 100ft. Jib, British manufactured current production model ex hire fleet, in first-class condition and guaranteed.

ANDERSON AND CO., Sheldon.

BIRMINGHAM. Sheldon 2424.

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ANDERSON AND CO., LTD., 45a Market Place,

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CONCRETE MIXERS FOR SALE.
 5/3½ Wingets, two or four steel wheels, fitted with petrol engines or electric motors. Checked and serviced ready for use. Choice of several.
 5/3½ Liners, on four steel wheels, fitted with Petter and Lister petrol engines and Petter diesel. Choice of several good machines.
 5/3½ Liner, high-speed trailer model, fitted with Petter petrol or diesel engine.
 5/3½ Wall-Ace, on four steel wheels or four pneumatics. Choice of three machines, with Petter petrol or diesel engines. Overhauled and in good condition.
 5/3½ Goodwin-Barsby, on four steel wheels or four pneumatics. Choice of several overhauled machines. Petrol or diesel.
 5/3½ Benford, on four steel wheels. Choice of several overhauled machines, with petrol or diesel engines. Many other machines in stock. New Barford 4 and 5/3½ Mixers from stock.

W. V. DAVIES,
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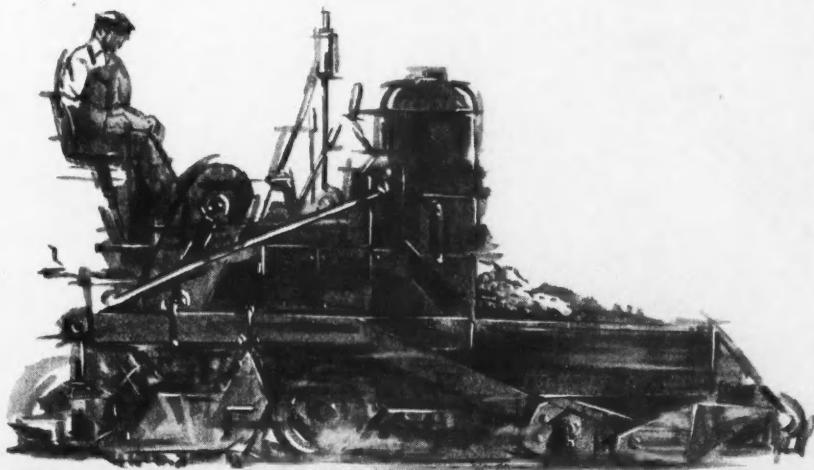
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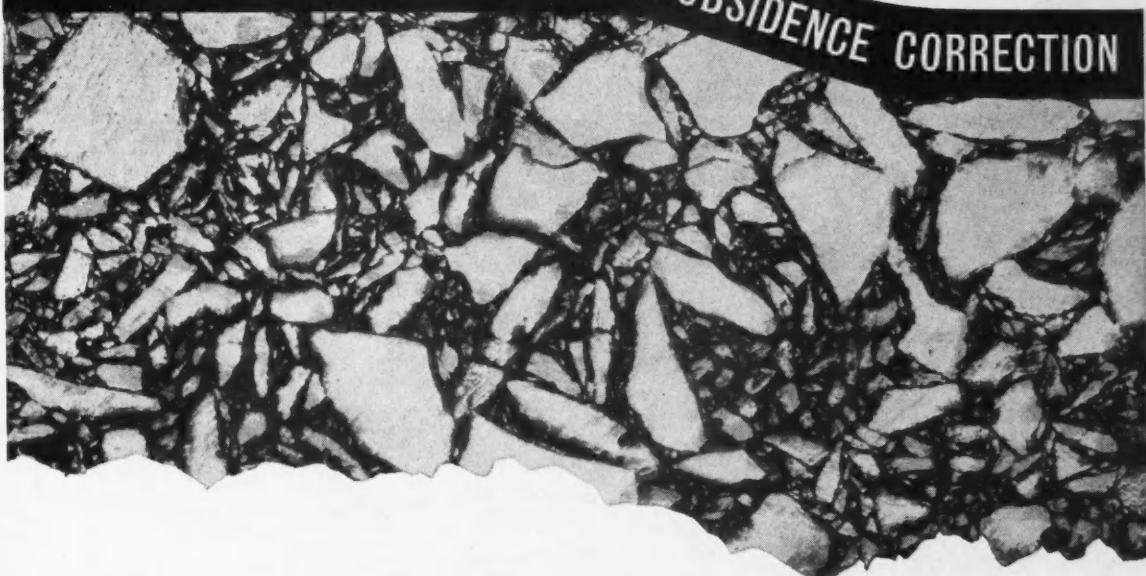
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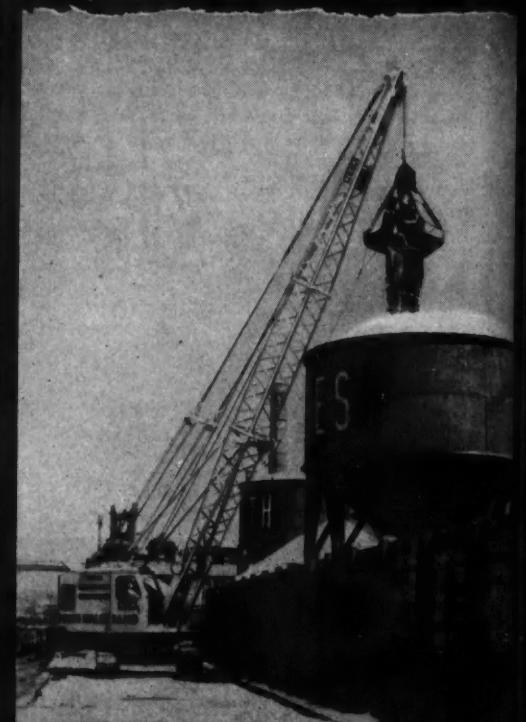
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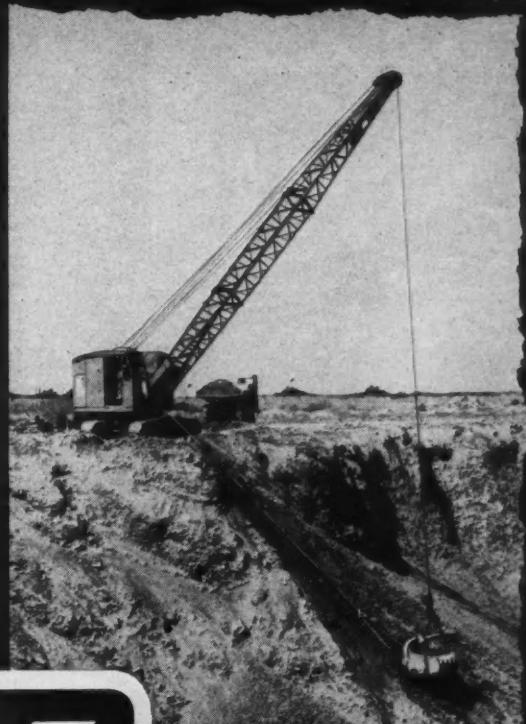
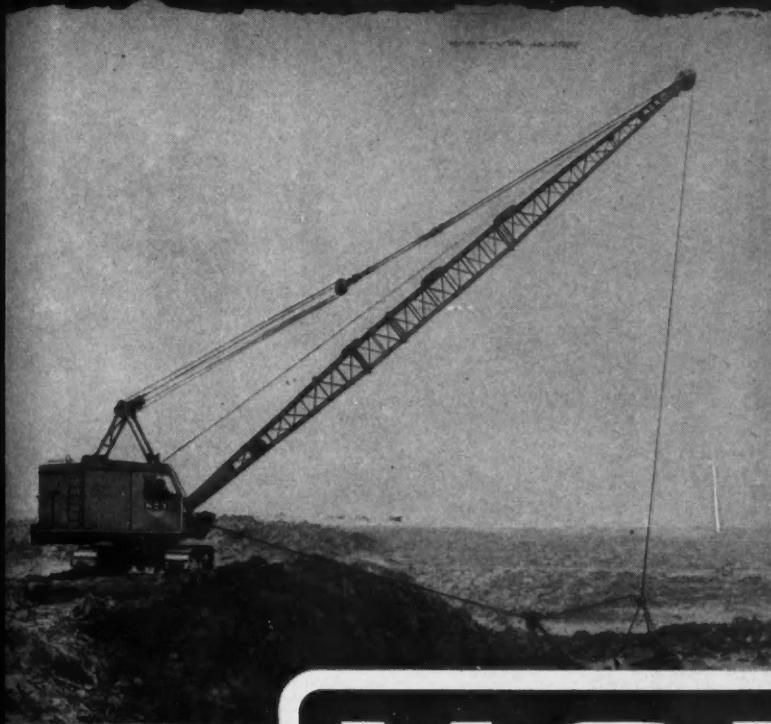


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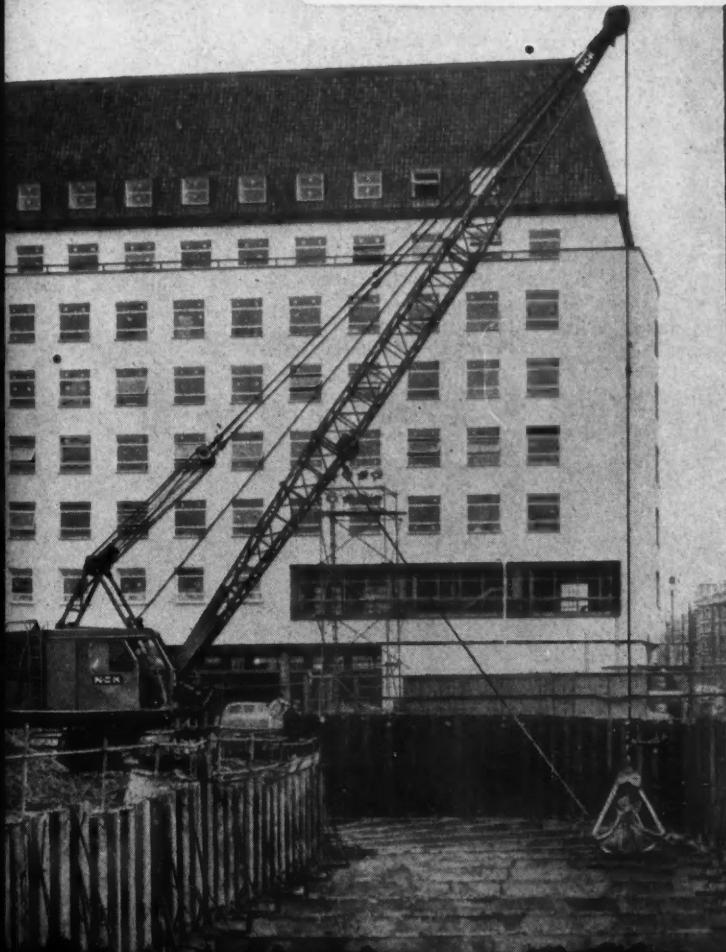
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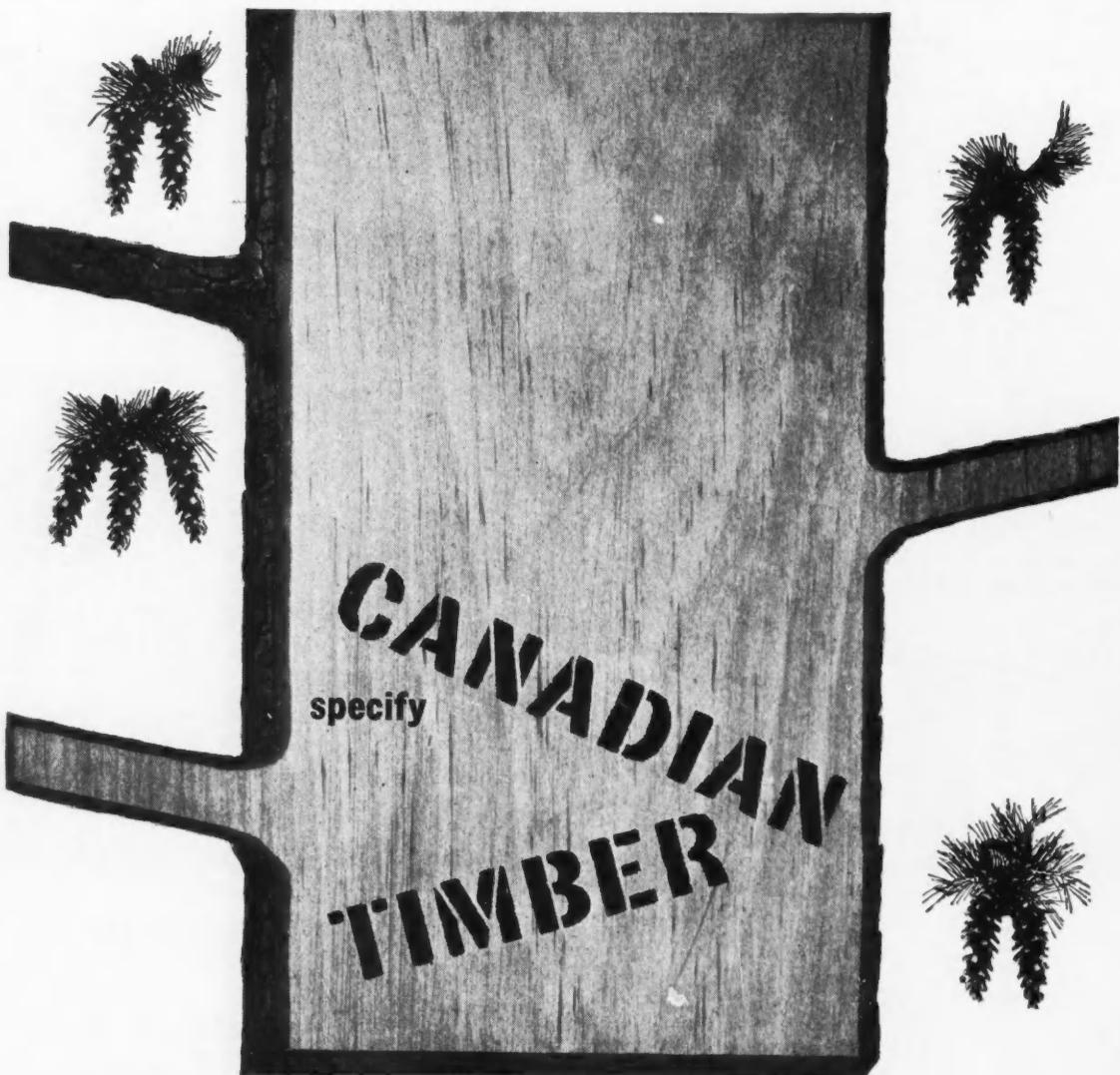
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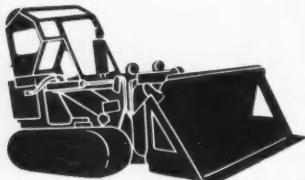
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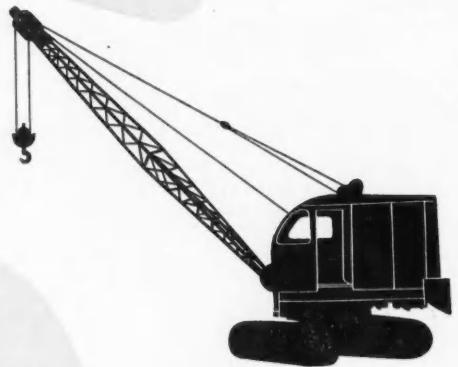
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B.T.D. 6 Drott Skid Shovels



Jenbach Compressors



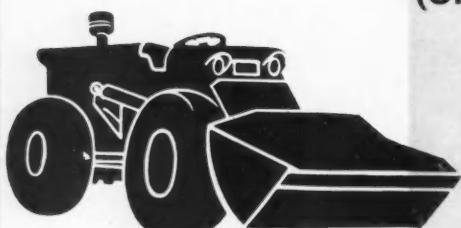
Smith 21 Crawler Cranes
BK 50 Crawler Cranes



J.C.B. Hydraulic Excavators

CHAMBERLAIN

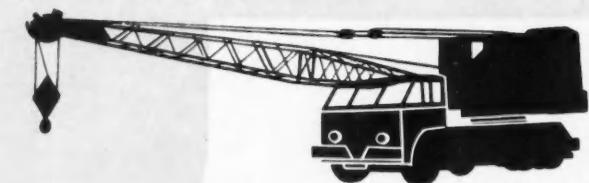
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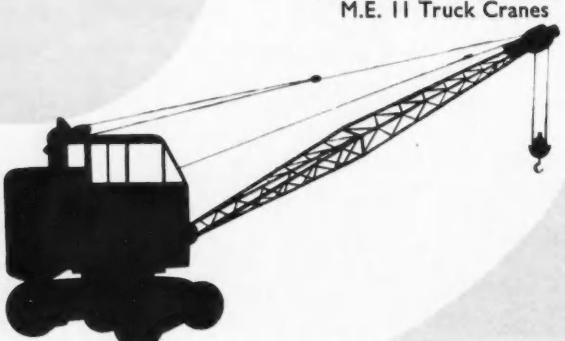
Case Loading Shovels



SMITH 21 Excavators and
BK 50 Excavators



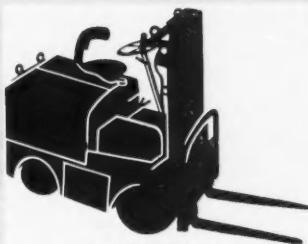
22 R.B. Lorry Mounted Cranes
M.E. 11 Truck Cranes



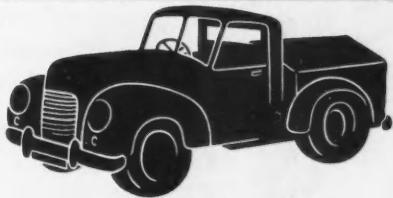
KL 44 and
KL 66 Cranes

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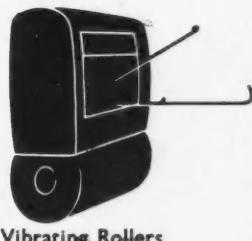
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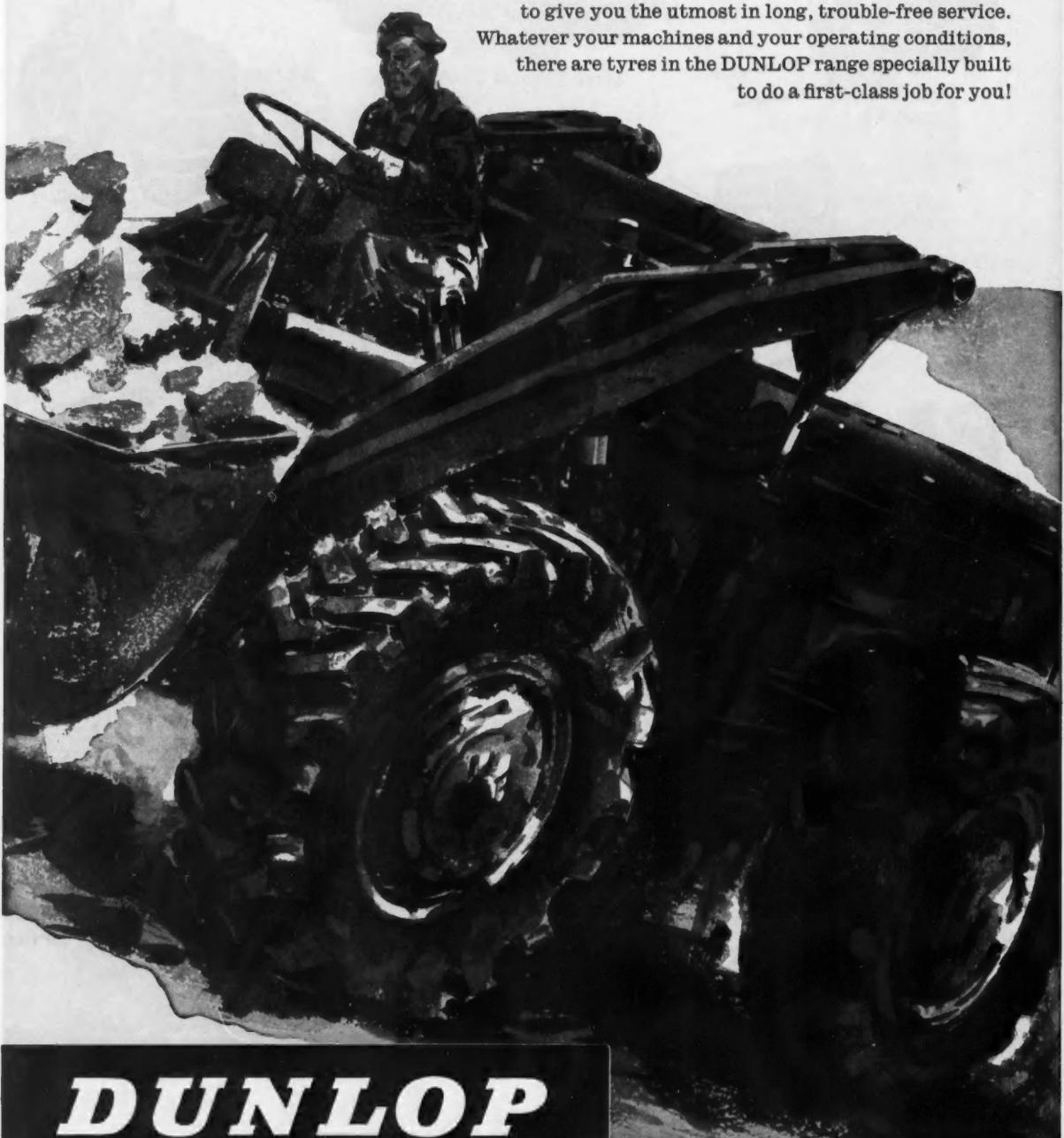
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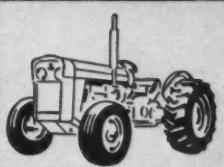


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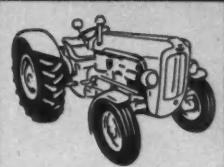
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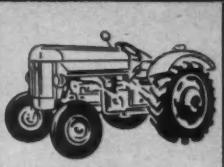
MF 203 TRACTOR



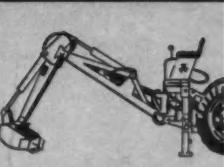
MF 205 TRACTOR



MF 35 H & S



MF 65 R & S



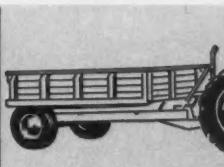
MF 710 DIGGER



MF 16 DUMPER



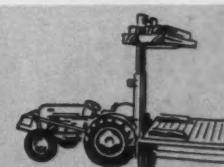
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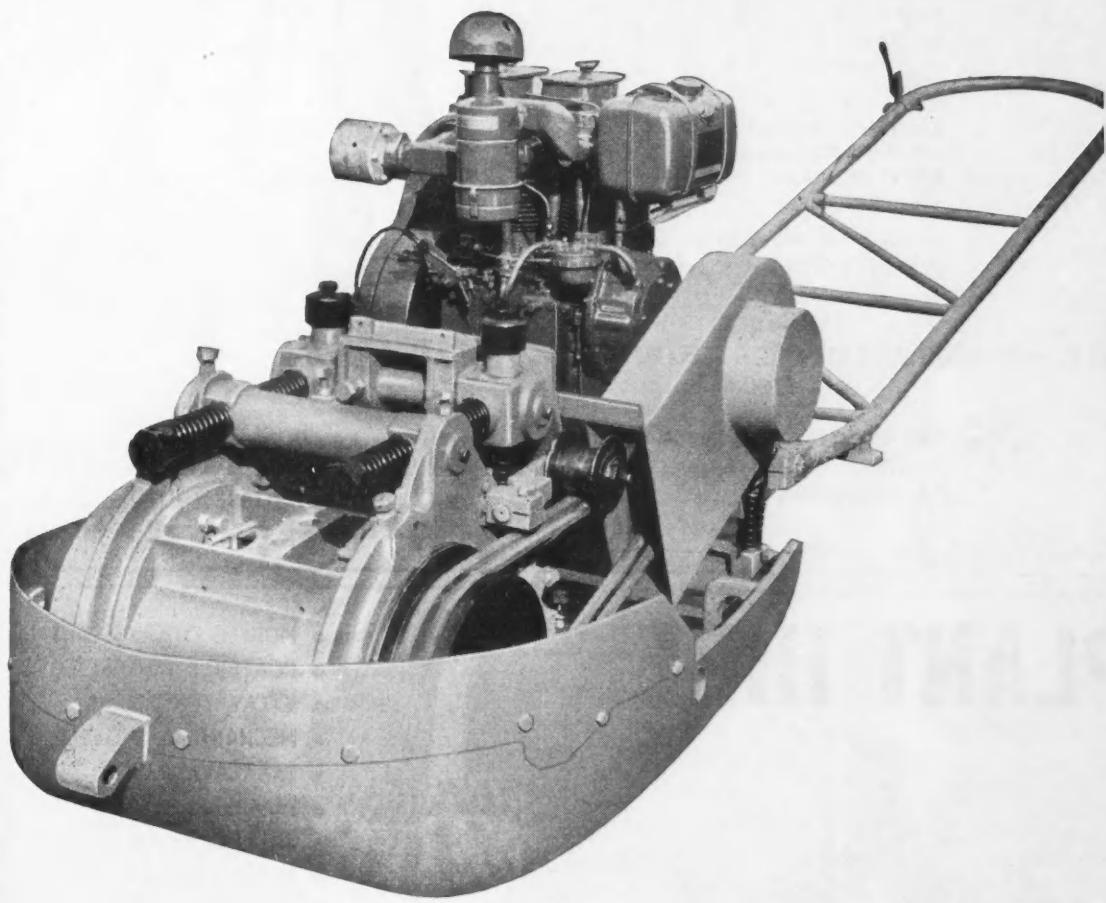


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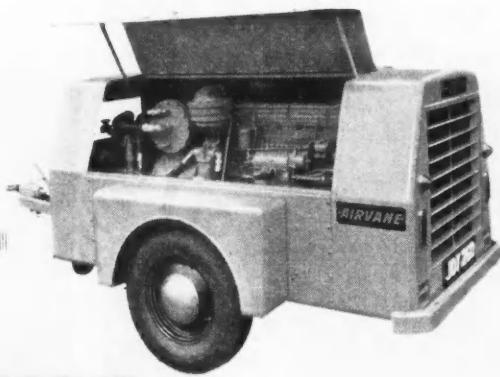
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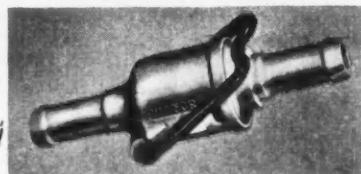
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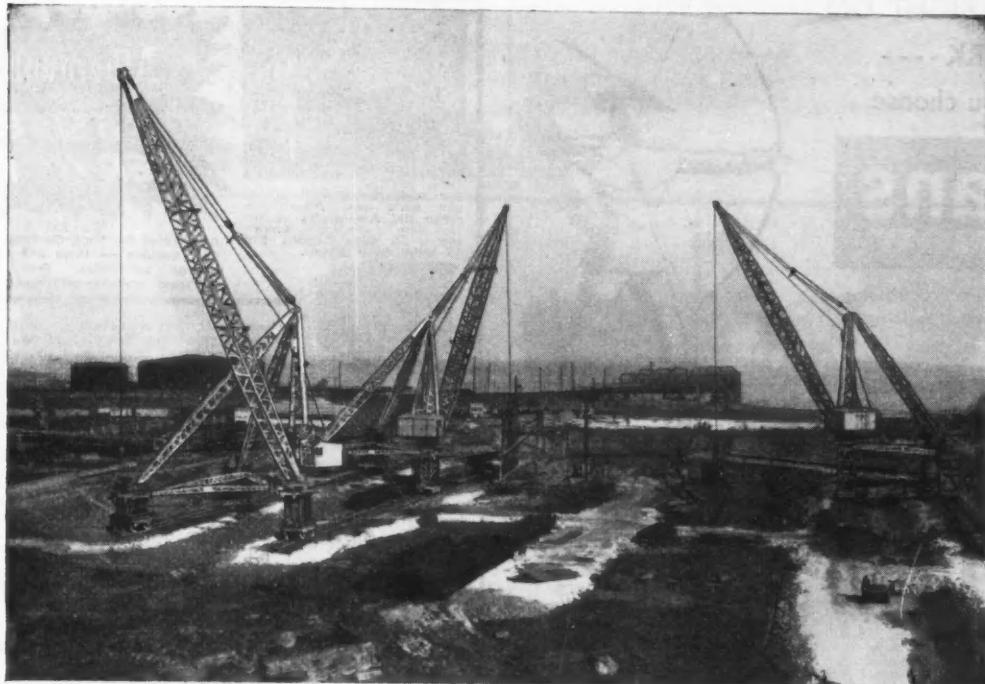
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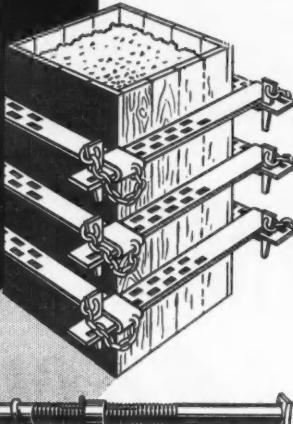
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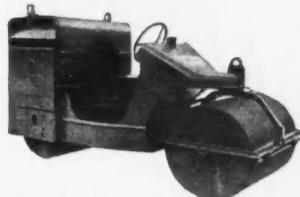


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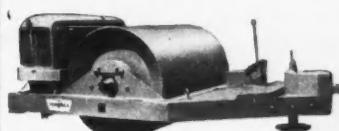
Self-propelled 32R



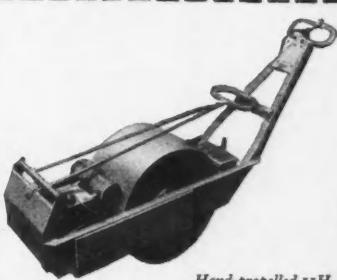
Self-propelled, hand guided 32WD



Self-propelled 42RD (with cab)



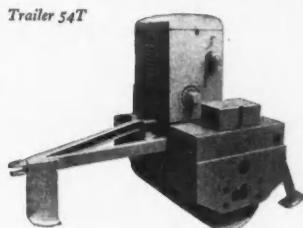
Trailer 72T



Hand-propelled 11H



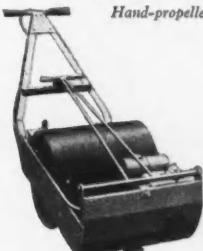
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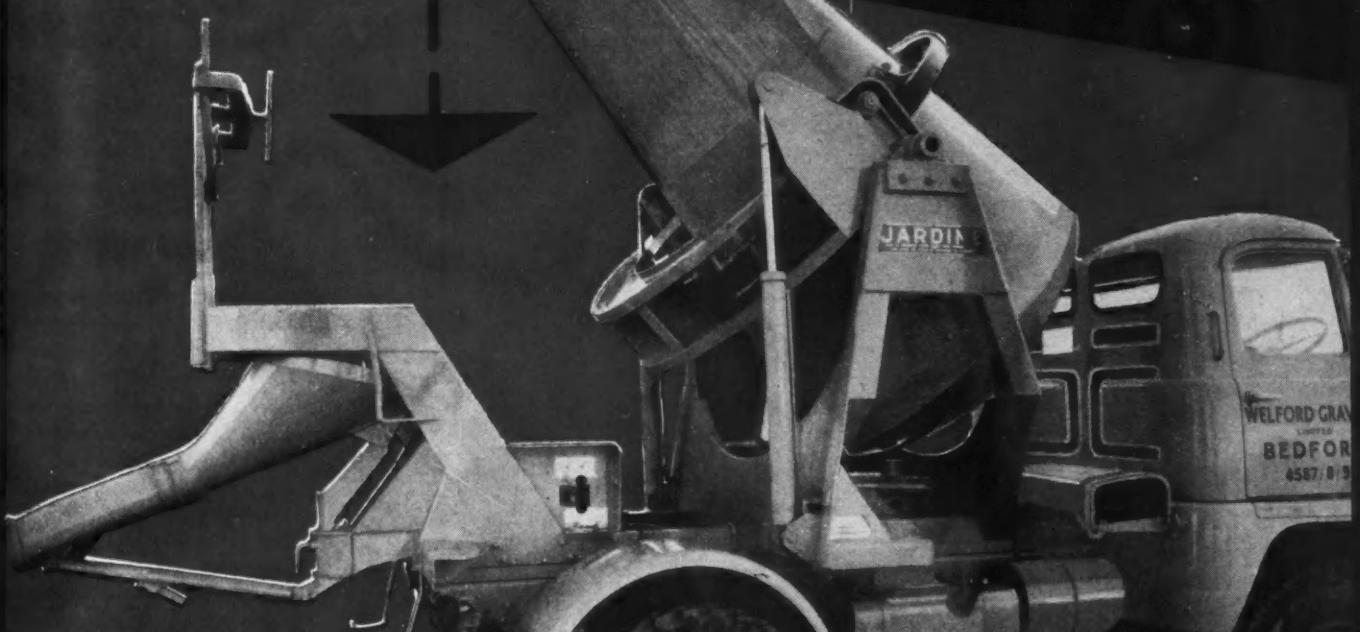
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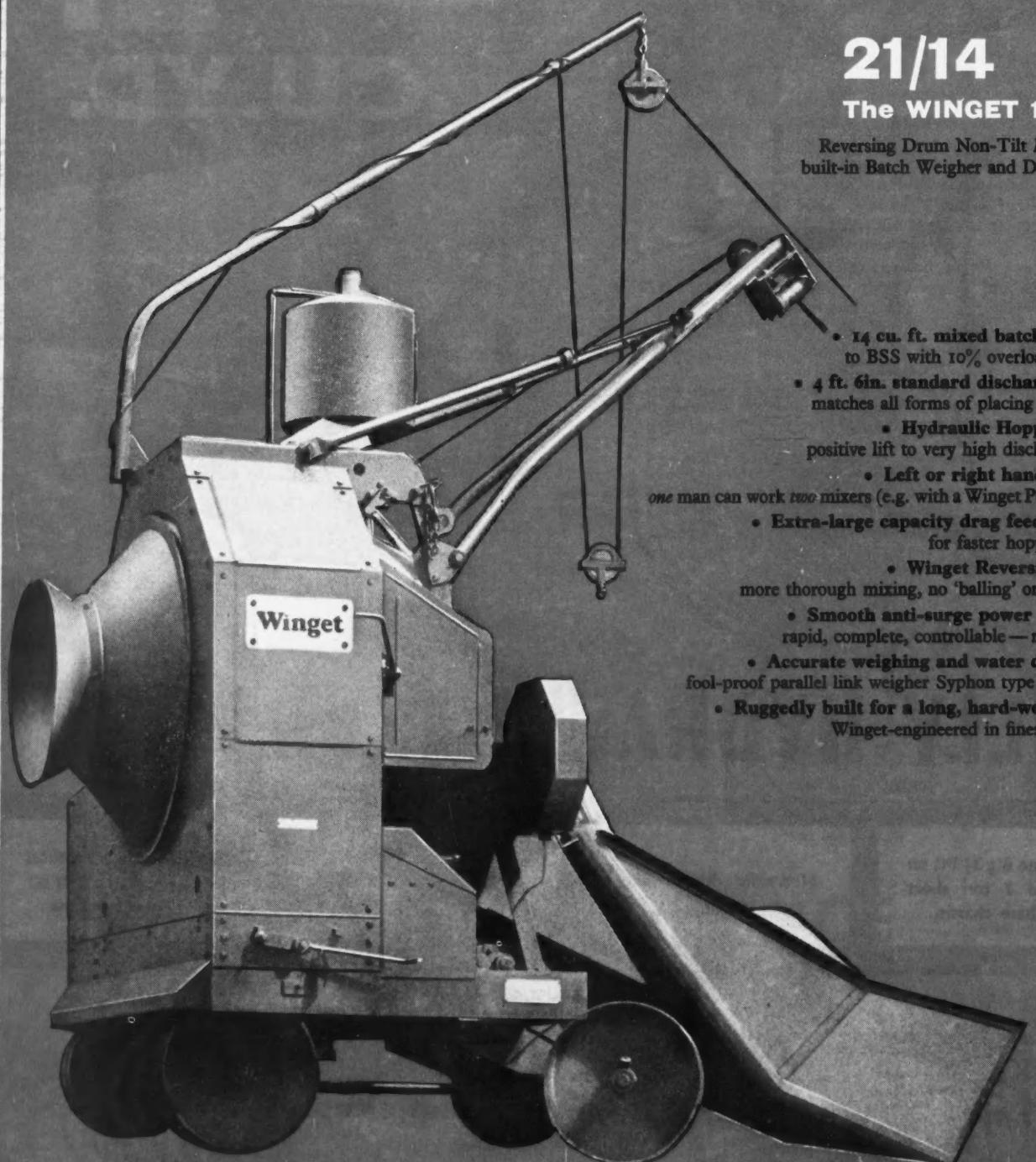
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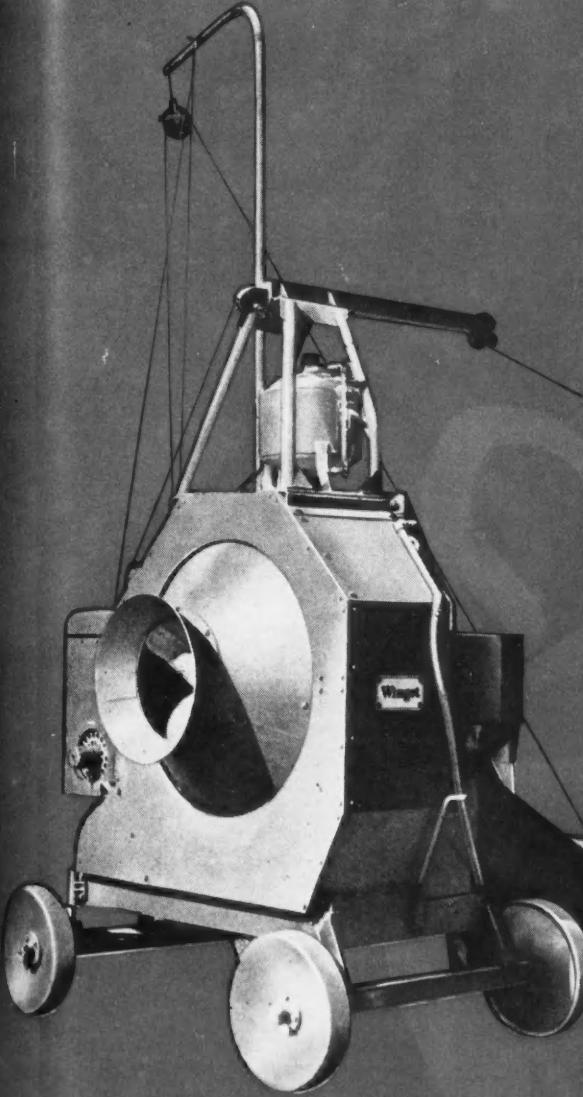


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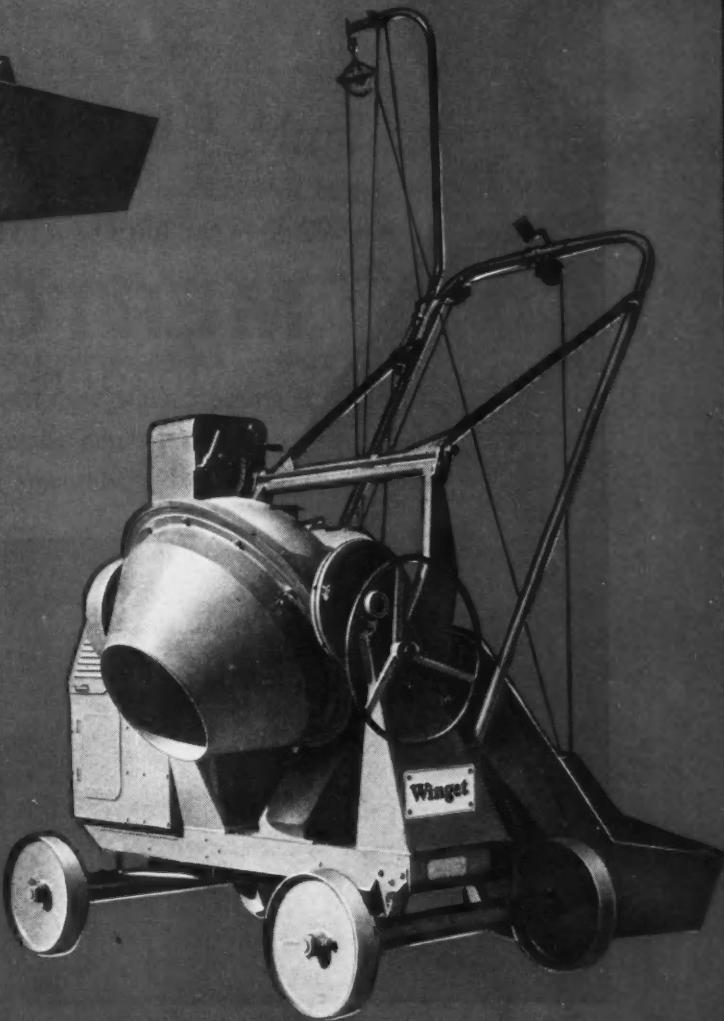


14/10

The WINGET 10NT/R

Reversing Drum Non-tilt Mixer with built-in Batch Weigher and Drag Feeder

- 10 cu. ft. mixed batch capacity
- 4 ft. standard discharge height
- Winget Reversing Drum
- Smooth anti-surge discharge
- Shock-free drum reversal
- Accurate weighing and water dispensing
- Easy servicing — grease points grouped



10/7

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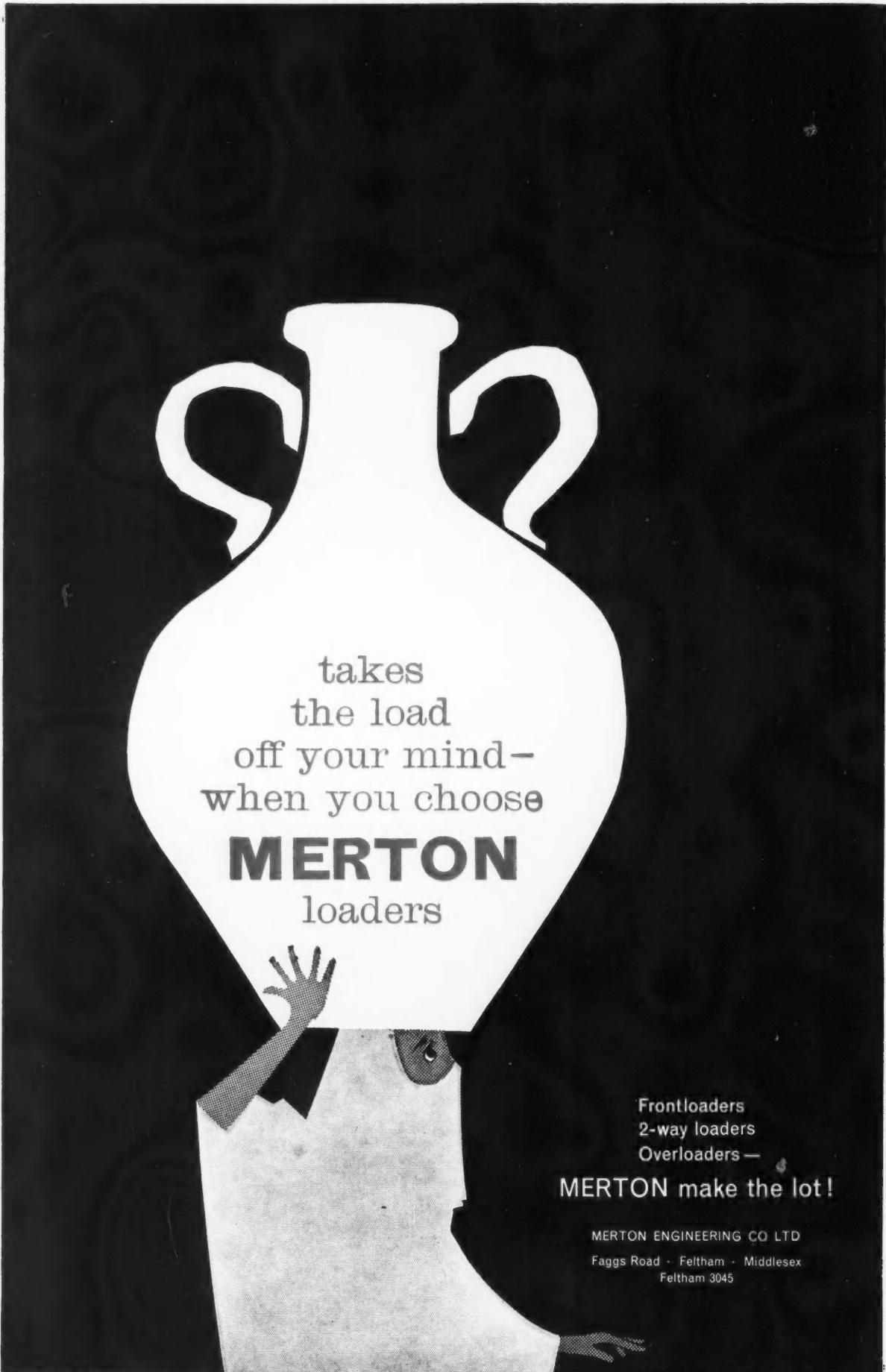
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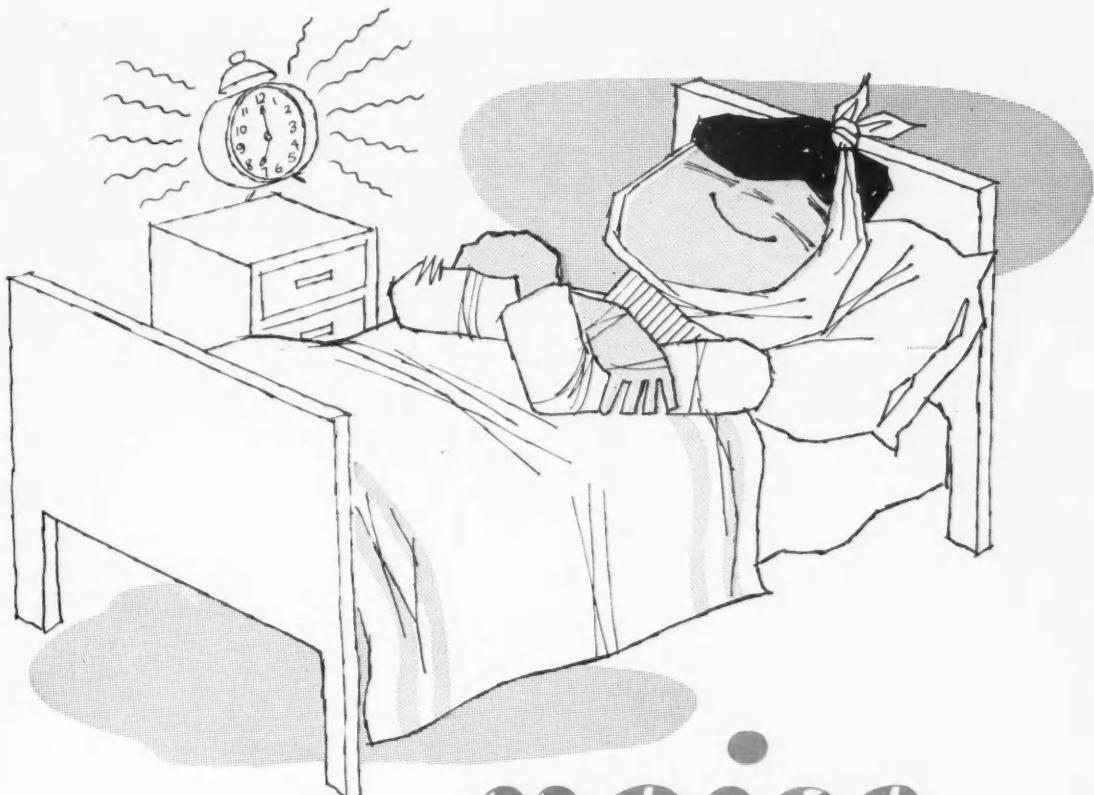
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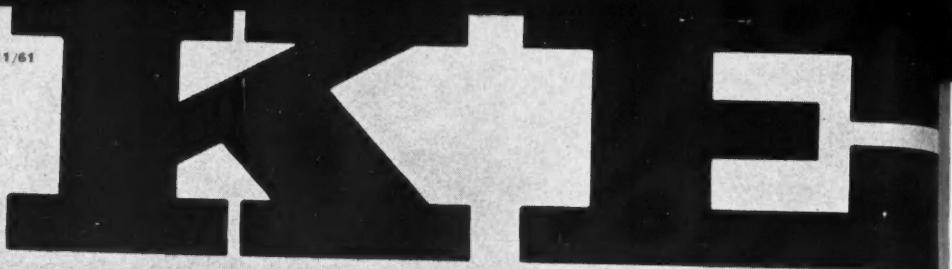
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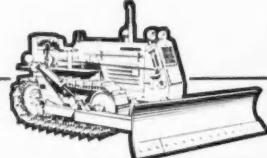
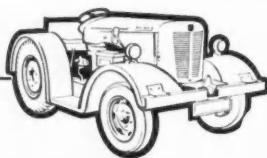
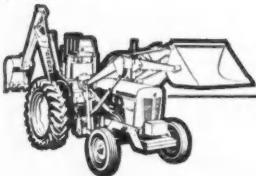
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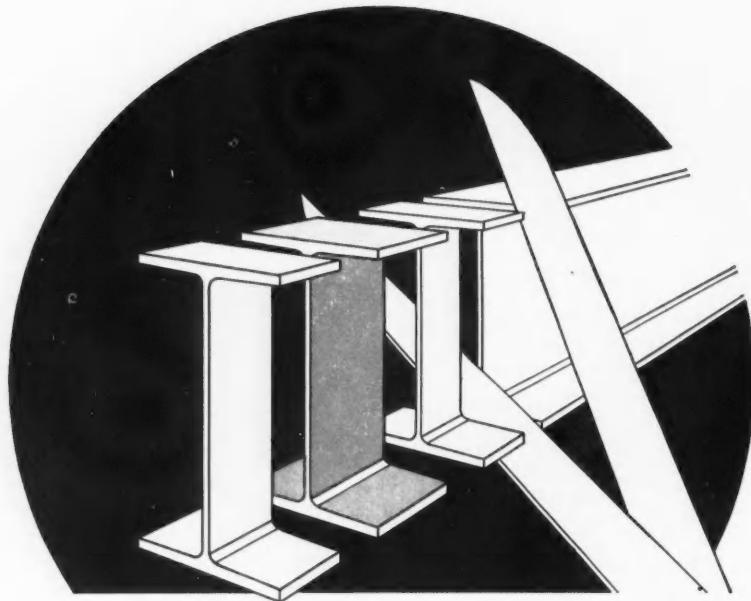
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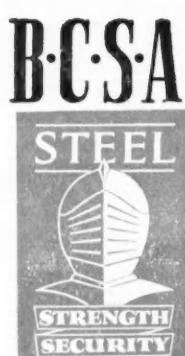
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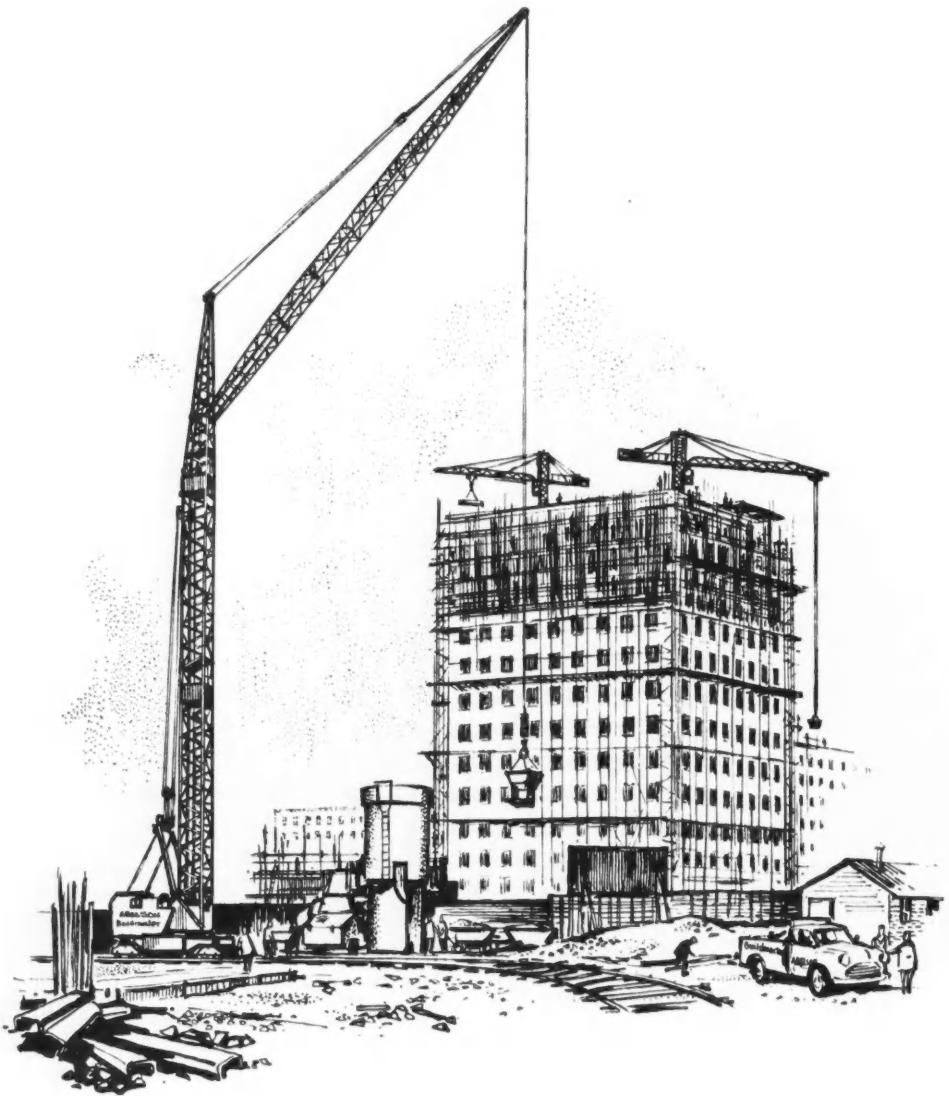
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ALRESFORD SAND AND BALLAST CO., LTD., Alresford Creek, near Colchester, Essex. (Tel.: Wivenhoe 314/494.) Pits at Alresford Creek, Brightlingsea, Boxford, Bures and Holland. All grades of washed shingle, concreting sand and building sand. Road and water transport.

BAKER, F. AND LTD., 73a Royal Road, Ruislip, Middlesex. (Tel.: Ruislip 1031/2.) Pits at Great Totham, Heybridge and West Tilbury. All grades of washed material supplied and delivered; also hardcore ashes and bricks.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicestershire. (Tel.: Coalville 1226/7/8; or London: VIGilant 2530.) (For details, see Leics.)

BUCKLEYS COMPANY LTD., Sand and Ballast Pits, Marthas, Ardeleigh, Colchester. (Tel.: Ardeleigh 310.) All grades of washed aggregates, sand, building sand, asphalt, grit. Sterilised dry sand accurately graded to buyers' requirements.

DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

FERRIS LTD., The Lime Kiln, Garage, Farnham. (Tel.: 8721/2/3001/2.) Pits at Orsett, near Stanford-le-Hope, and Unminster. All grades of washed aggregates, plastering and building sands supplied and delivered, also hardcore.

HALL AND CO., LTD., Manor Road, Romford. (Tel.: Romford 42321.) Pits at Upminster, Boreham and Little Hall. Gravel, sand and gravel aggregates, concreting, plastering and building sand.

HOVERINGHAM GRAVELS LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

HUNNABLE, F. A., AND SON LTD., Rayne Road, Braintree, Essex. (Tel.: Braintree 151 and 1531.) Graded washed stone, sand, washed and washed concreting sand and washed soft building sand. Classified sand for asphalt. Ready mixed concrete to all grades. Pits at Braintree, Bocking, Beasley End, Hedingham and Alphamstone.

KENRICK, W., LTD., 92 Waterloo Road, Romford, Essex. (Tel.: 42481/2.) Supply and deliver all grades of sands, ballast and shingle, asphalt grits, granite aggregate. Rubble clearance. Tip available at Upminster.

LEIGH BUILDING SUPPLY CO., LTD., Head Office: 956 London Road, Leigh-on-Sea, Essex. (Tel.: 78264—5 lines.) All grades washed materials, building sand, hardcore, ashes, bricks, granite.

PETERS AND BARHAM LTD., 309 South Street, Romford. (Tel.: Romford 44141—7 lines.) Washed and graded gravel, all sizes. Sand pits at Asheldown, Chigwell, St. James, Dagenham, Great Waltham, North Ockendon, Roxwell, West Thurrock, Romford and Thorpe-le-Soken.

PINCH, L. A. AND A., LTD., Upper Rainham Road, Elm Park, Hornchurch, Essex. (Tel.: Hornchurch 48912/3/4.) Haulage, all aggregates and excavation.

READ, P. T., LTD., Fairlop Airfield, Forest Road, Ilford. (Tel.: Hainault 6111/2/3.) High-grade sands, ballast and shingle supplied and delivered; also ready-mixed concrete.

ST. ALBANS SAND AND GRAVEL CO., LTD., London Colney, St. Albans, Herts. (Tel.: Bowmans Green 2211/2.) Pits at Meadgate Road, Road, Nazeing; Station Road, Watford, Ayot.

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4 and Halstead 2323.) Pits at St. Ives and Goshfield, near Halstead.

STANWAY CONTRACTS LTD., Upper Edwards Hall, Basildon, Essex. (Tel.: Basildon 55161.) Sand and gravel pits at Rochford and Woodham Walter. Graded aggregates supplied or delivered.

WIVENHOE SAND, STONE AND GRAVEL CO., LTD., Wivenhoe near Colchester, Essex. (Tel.: Wivenhoe 231.) High quality washed aggregates of all sizes.

GLOUCESTERSHIRE

BENGRY AND SONS LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

COKE, T. F. (CHELTENHAM), LTD., 267 Gloucester Road, Cheltenham. (Tel.: Cheltenham 4717/4874.) Sand, graded gravel aggregates, hardcore, limestone, chippings, tarred and bituminous limestone, concrete blocks, fence posts, etc.

CROMHALL QUARRIES LTD., Cromhall, Wotton-under-Edge, Glos. (Tel.: Falfield 346/7.) Concrete aggregates, pre-graded in large quantities. Tarmacadam, tarmac, bituminous macadam and cold asphalt to B.S.S. for hand or machine laying.

GRIFFITHS, A. AND SONS LTD., Churchdown 2135 and 2216. Pit, quarry and dredger owners. All grades and types aggregate materials.

HALL AND CO., LTD., Longmoor House, Ashton Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.

CONTRACTORS' GUIDE TO AGGREGATES

GLoucestershire

HOVERINGHAM GRAVELS LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
NORTH WILTS. QUARRYING CO., Noble Street, Swindon, Wilts. (Tel.: Swindon 3219-3 lines.) (For details, see entry under Wilts.)
SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. Concrete aggregates, roadstones, and Dolomitic media.
TATE & LYLE, (Tel.: Wootton Bassett, near Swindon, Wilts. (Tel.: Wootton Bassett 391-5 lines.) Cotswoold stone, hardcore, washed and graded aggregate, building sand.
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel.: Coleford 3158/9.) Tarred and bituminous limestone macadams, asphalt, concrete aggregates, dolomitic media, engineering, facing and common bricks for all purposes. Delivery road or rail.

Hampshire

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGilant 2530.) (For details, see Leics.)
BULL BROS. S. AND L. LTD., 126A High Street, Andover, Hants. (Tel.: 264-.) Concreting aggregates (reconstituted or mixed), washed and graded (to any specification); also ballast, hogs, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Swan and Totton.
DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
HALL AND CO. LTD., Baltic Wharf, Marine Parade, Southampton. (Tel.: Southampton 354-5 and 51.) Pits at Ringwood, Highbridge and Fawley. Gravel aggregates, concreting, plastering and building sand.
HASKINS, G., AND SONS, Queen Street, Emsworth. For washed sand and graded aggregates, path and road gravel, hoggings, clinker, ashes. (Tel.: Emsworth 2271.)
HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
MIDLAND AGGREGATES, LTD., Eversley, near Basingstoke, Hants. (Tel.: Eversley 2250.) Washed and pit sand, aggregates.
MOREYS (VERWOOD), LTD., Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggings, path gravel.
NEW MILTON SAND AND BALLAST CO., Lympington Road, New Milton, Hants. (Tel.: 37 and 566.) Guaranteed uncrushed, washed, screened and graded concrete aggregates. All sizes. Washed sharp and fine sand.
NORTH WILTS. QUARRYING CO., Noble Street, Sherston, Wilts. (Tel.: Sherston 321-3 lines.) (For details, see entry under Wilts.)
PRYETT, W. G., AND SONS, LTD., Drayton Lane, Portsmouth. (Tel.: Cosham 70059.) Concrete aggregates, building sand, hoggings, ashes, washed and graded filter media, etc.
RALPH OF BASINGSTOKE, LTD., 37 Kempshott Lane, Basingstoke, Hants. (Tel. 85.) Concrete aggregates, building sand, path gravel, hoggings, etc.
TWICKENHAM GRAVEL CO., LTD., Ship Lane, Farnborough (Tel. 1126); Sandhurst Road, Yateley (Tel. 2230).

Herefordshire

BENRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) Suppliers of all grades of crushed concrete aggregates, road metalling, pitching stone, hardcore and coated macadam.
HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
NATIONAL ROCKS, STONE AND LIME, LTD., Presteigne, Radnorshire. (Tel.: Presteigne 352.) All grades of tarred and bituminous macadam, roadstone, chippings and concrete aggregates, etc.
OLD RADNOR TRADING CO., LTD., Kingston. (Tel. 421.) Granite and limestone aggregates, coated macadam, concrete products.
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.
SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. Concrete aggregates, roadstones and Dolomitic media.
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

Hertfordshire

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGilant 2530.) (For details, see Leics.)
DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
EASTWOODS SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2048.) Brixtonbourn pit. (Tel.: Hoddesdon 286-.) Producers and distributors of all grades of washed aggregates.
GABRIEL, C., LTD., Palmers Lane, Enfield, Middlesex. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Hertford and Enfield.
HALL AND CO. LTD., Railway Yard, Orchard Road, Stevenage. (Tel. 775), and at Hatfield. Gravel aggregates, concreting, plastering and building sand.
HARTIGAN, G. F. X., LTD. (See Buckinghamshire.)
ST. ALBANS SAND AND GRAVEL CO., LTD., London, Colney, St. Albans, Herts. (Tel.: Bowmansgreen 2271.) Pits at Smethwick, Luton, Hertford, and Bramble Lane, Watford, Marsh Road, Stanstead Abbotts.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) And Three Hills Pit, Codicote. (Tel.: Codicote 217.)
TWICKENHAM GRAVEL CO., LTD., Eleanor Cross Road, Waltham Cross. (Tel. 23388.)
WEBB, G., AND SONS, 35 Magrath Ave., Cambridge. (Tel.: 5966/5396/5052 (night). (See Camb.)
WINFIELD, HENRY, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Buxtedham 108/9.) Pits at Hemel Hempstead, Watford, West Hyde, Rickmansworth. Concrete aggregates, hoggings, building sand.

Huntingdonshire

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGilant 2530.) (For details, see Leics.)
FERRERSAND AGGREGATES LTD., Northampton. (Tel.: Quarrs, Rushton 354/5.) (See Northants.)
GRAVEL PRODUCTS (HUNTS), LTD., Little Paxton, St. Neots, Hunts. (Tel.: St. Neots 308.) Pits at Little Paxton, St. Neots, Hunts; and Blunham, Beds.
HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough. (Tel.: 5534/5) and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay, sand, etc.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.
WEBB, G., CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel.: 5966/5396/5052 (night). (See Camb.)

Kent

BRASSTED SAND PITS, Brassteds, Kent. (Tel.: 586.) London Office: 10A Ellery Street, S.E.15. (Tel.: New Cross 3327.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.W. bricks, ashes, etc.
BROWN, BRISS. (SITTINGBOURNE), LTD., Chalkwell, Sittingbourne, Kent. (Tel.: Sittingbourne 330.) Sand, ballast, shingle, hoggings, hardcore, clinker, chalk, etc.
CLUBB, J., LTD., Dartford, Kent. (Tel.: Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, ready mixed concrete.
DIAMOND TREAD CO. (1958), LTD., Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarry owners, tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel. City 7001-10 lines.)
DIAMOND TREAD CO. (CARLTON LTD.), Swan Lane, Quavers, Little Chart, Ashford, Kent. Quarry owners, tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel.: W. Malling 3444.)
HALL AND CO., LTD., Canning Street, Maidstone. (Tel.: Maidstone 5105.) And at Folkestone and Dover. Pits at Lundsford, near Larkfield, Rivermede. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.
HARRIS, M. P., AND CO., LTD., Station Road, Paddock Wood, Kent. (Tel.: 385.) (See Sussex.)

Lancashire

BROOMBYS, LTD., Sandgate, Milnthorpe. (Tel.: 3251/2.) Westmorland. (See Westmorland.)
BUCKTON QUARRY, Broken stone, all grades. (Tel.: Mossley 123.) Or write Main Road, Oldham.
CASLETON SAND AND GRAVEL QUARRIES, LTD., Trows Lane, Castleton, near Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup. (Tel.: Bacup 287.) Washed pit sand, crushed washed and graded aggregates, building stone.
CROXDEN GRAVEL LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.
HARTLEY, JOHN, W., LTD., Lundsfield Quarry, Carnforth, Lancs. (Tel.: Carnforth 2040.) Large producers of highest quality washed sands, clean washed natural pebbles and crushed gravel aggregates for all construction purposes.
HILTON GRAVEL LTD., Rice Street, Liverpool Road, Manchester, 3. (Tel.: Didsbury 5455 and 5456.) Quarries at Cheadle, Staffs. (Tel.: Tean 241.) and at Cheadle, Stoke-on-Trent. (Tel.: London 32196.)
HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, M. (Tel.: 2119/2274/5.)

PENMAENMAWR AND WELSH GRANITE CO., LTD., all sizes and gradings of crushed granite aggregate. Immediate delivery ex stock. Liverpool and Preston Depots: Office: 7 Picton Road, Liverpool, 15. (Tel.: 5107/5200.) Manchester Depot: 7261. (Tel.: 5107/5200.) Office: Cornbrook Road, Manchester, 15.

TERN MILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)
TRENTHAM GRAVE CO., LTD., Lordsey Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Graded lime, sand, gravel, and sand. (Tel.: Pipe Gate 304/5.) All sizes, crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.
WITHERS LIMESTONE LTD., Back Lane Quarry, Carnforth. (Tel.: Carnforth 427.) Graded lime, sand, aggregate to B.S.S. all sizes. Immediate delivery ex stock.

X.L. GRANITE (INGLETON), LTD., Head Offices: Clapham, via Lancaster. (Tel.: Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

Leicestershire

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London Office: VIGilant 2530.) Best Leicestershire grey granite, dry and coated gradings to any specification, cold asphalt and wet mix. Prompt rail/road delivery.
CLIFFORD GRANITE CO., LTD., Markfield, near Leicester. (Tel.: Markfield 561/2/3.) Granite aggregates to B.S.S. All sizes. Tarred and bituminous granite, concrete slabs and kerbs. 1in. washed granolithic aggregate.
DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298. Diston 505.) (See Northamptonshire.)
ENDERBY AND STONEY STONER GRANITE CO., LTD., 21 New Walk, Leicester. (Tel.: 20891.) Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel.: Amb. 1141.)

Leicestershire

HILTON GRAVEL LTD., Hemington Fields, near Shardlow, Derby. (Tel.: Shardlow 266.)
HOVERINGHAM GRAVELS LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)
OUNTSORREL GRANITE CO., LTD., 21 New Walk, Leicester. (Tel.: 20891.) Quarries at Mountsorrel, near Loughborough. 1in. pink granite a speciality. London Office: 29 Dorset Sq., N.W.1. (Amb. 1141.)
WANLIP GRAVELS LTD., Wanlip, Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel.: Syston 2224 and 2225.)
WREAKE VALLEY GRAVELS CO., LTD., Melton Mowbray. (Tel.: Pit-Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand, transit mixed concrete.

Lincolnshire

CONINGSBY SUPPLY CO., LTD., Registered Office: The Broadway, Pockthorpe Spa, Lincoln. (Tel.: Woodhall 332.) Screened limestone, hardcore,itching, filling, flint, hoggings. Ex quarries or delivered.
DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)

GIBBONS & SONS LTD., Registered Office: Welby House, Market Deeping, near Peterborough (Tel.: Market Deeping 332/1/2383.) Pits at Langtoft, near Peterborough. (Tel.: Market Deeping 2210.) All grades washed sand and aggregates.

HARTSHOLME GRAVEL AND SAND CO., LTD., Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, 17 West Parade, Lincoln. (Tel.: Lincoln 23391.)

HOVERINGHAM GRAVELS LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

HURDISS, J. W., LTD., Victoria Street, Grimsby (Tel.: Grimsby 3657) and Caistor (Tel.: Caistor, Lincs. 281.) Building, plastering, concreting sand; also gravel, ballast, hoggings & roadmaking materials.

PETERBOROUGH QUARRIES, LTD., Sandymore, Maxey, Peterborough. (Tel.: Market Deeping 2355-3 lines.) Quarry at Ropsey, all grades of hardcore and broken stone. (See also Northants.)

POLLARD, C., AND SONS (TANBRIDGE), LTD., Tanbridge House, Langtoft, Peterborough. Pits at Tallington, near Stamford, Lincs. (Tel.: Market Deeping 2140.) All grades washed sand and aggregates. For "Supercrete" ready mixed concrete, phone Market Deeping 3132.

SCREETON BROTHERS (BARON PON-HUMBER), LTD., 21 New Walk, York. (Tel.: Baron Pon-Humber 1111.) All grades washed sand and gravel, roadstone, hardcore, washed silica sand, etc. Pits and quarries throughout the county.

London

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGilant 2530.) (For details, see Leics.)

BUCKS COMPANIES LTD., 57 Plaza Chambers, Covent Garden, London, W.C.2. (Tel.: Covent Garden 0534.) All grades of washed aggregates, sand, building sand, asphalt, grit. Sterilised dry sand accurately graded to buyers' requirements.

COX, H. AND SONS, LTD., 33 Southampton Way, Chiswick, S.W.3. (Tel.: Roden 2215-3 lines.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, N.W.3. (Tel.: HAMpstead 8044-8.) Granite limestone or slag, coated or dry, all sizes and pitching, granite kerb and setts, felspar quartz and other minerals by road or rail, or ex London stock.

DORSET LIMESTONES, LTD., Fumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) (For details, see Dorset.)

DRINKWATER, W. W. (WILLESDEN), LTD., Dudden Hill Lane, Willesden, N.W.10. (Tel.: Gladstone 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.) Also Stanmore Road, Hounslow Heath, Middlesex. (Tel.: Hounslow 222/3/4.)

GABRIEL, C. LTD., Palmers Lane, Enfield, Middlesex. (Tel.: Howard 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.

GREENHAM SAND AND BALLAST CO., LTD., Chertsey Road, Feltham. (Tel.: Feltham 2285/7.) Pits at Hounslow, Feltham and Staines. Concrete aggregates, plastering and building sand.

HALL AND CO., LTD., Chantrey House, Ecclesdon Street, S.W.1. (Tel.: Sloane 7122.) And at East Dulwich, Poplar and Wandsworth. Gravel aggregates, concreting, plastering and building sand.

HARTIGAN, G. F. X., LTD., Washed sharp sand to B.S.S. 882. (See Buckinghamshire.)

KEEDY AND SONS, 100 Cranville Road, Epping, Essex. (Tel.: Epping 2520.) All sands, ballasts, shingle and hardcore supplied.

LONDON BALLAST CO., LTD., (Tel.: Paddington 5064), 155A Porchester Terrace, North Paddington, W.2.

READ, P. T., LTD., Gales Gardens, Bethnal Green, W.1. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingle supplied and delivered and ready mixed concrete. Pits: Fairlop Airfield, Ford Road, Ilford, Essex. (Tel.: Hainault 6111/2/3.)

SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. (See Glos.)

Merionethshire

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel.: 961), Salop.

Middlesex

CROSS, GEO. C. AND CO., LTD., Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Concrete aggregates, hardcore, excavations, demolitions.

DRINKWATER, W. W. (WILLESDEN), LTD., 57 Plaza Chambers, Road, Hounslow Mtn., Middlesex. (Hounslow 622/3/5.)

GABRIEL, C. LTD., Palmers Lane, Enfield, Middlesex. (Tel.: Howard 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.

GREENHAM SAND AND BALLAST CO., LTD., Chertsey Road, Feltham. (Tel.: Feltham 2285/7.) Pits at Hounslow, Feltham and Staines. Concrete aggregates, plastering and building sand.

CONTRACTORS' GUIDE TO AGGREGATES

MIDDLESEX

GRUNDON, S., 100/104 Harlington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 3651/2/3.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.

HALL AND CO., LTD., Chantrey House, Eccleston Street, S.W.1 (Tel.: Sloane 7122), and at Ashford and Brentford. Pits: Bedfont and Shepperton. Gravel, aggregates, concreting, plastering and building sand.

LONDON BALLAST CO., LTD. (Tel.: Paddington 5064), 155A Porchester Terrace North, Paddington, W.2.

TWICKENHAM GRAVEL CO., LTD., Feltham Hill Road, Hanworth. (Tel.: Feltham 2638.)

NEAD, P. LTD., (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered also ready-mixed concrete. Pits: Edmonton Gravel Pits, Montague Road, N.9 (Tel.: Shoreditch 9128/9), and Fairlop Airfield, Forest Road, Ilford. (Tel.: Hainault 6111/2.)

STUART MACEY, LTD., Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/2.)

WID-WALES

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 3014/.) (See details under Herefordshire.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire.)

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Tel.: Kington 421.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel.: 961), Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

MONMOUTHSHIRE

MONMOUTHSHIRE ASSOCIATED QUARRIES, LTD., Head Office: 38 Chepstow Road, Newport, Mon. (Tel.: Newport 5831/2.) Suppliers of all grades of concrete aggregates, road metallising, pitching stone, tarmacadam and bituminous macadam in limestone, dolomite and blue pennant stone. Quarries throughout the county.

SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. (See Glos.)

WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel.: 3158/9.) (See Gloucestershire.)

MONTGOMERYSHIRE

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel.: 961), Salop.

NORFOLK

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

JOHNSON, P. LTD., Station Road, Terrington Clement, near King's Lynn. (Tel.: Terrington St. Clement 248.) Washed and screened gravel, roadstone, washed sharp and fine sands.

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4 and Coney Weston 12.) Pits at St. Ives and Knettishall, near Thetford.

NETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Pits: at Netterton. Concrete aggregates, building sand.

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) Washed and graded aggregates, stone and gravel delivered to all parts of Norfolk and Suffolk.

NORTHAMPTONSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 391/2.) Manufacturers and suppliers of all grades limestone, tarmacadam, dry, pitching stone, hardcore, etc.

BRAYBROOK, E. W., LTD., Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S. 803, building and hardcore.

DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 509.) Products of building and walling stone, roadstone, hardcore, broken stone, ashes, sand, gravel and hoggin. Immediate delivery throughout Northamptonshire.

FERRERSAND AGGREGATES, LTD., Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all grades of high quality concrete aggregate to B.S. 803. Delivers throughout Northamptonshire and adjoining counties.

GIBBONS, F. B. AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO. (Prop. Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

MACKANESS, A. J., LTD., Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades of washed aggregates. Building sand, Mixmaster (lime/sand mortar). Prompt deliveries.

NEPE BAR, LTD. AND LIGHTING CO., LTD., Market Chambers, Peterborough. (Tel.: 334/5/6) and Ship End Quarries, Wansford, near Peterborough. (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.

NORTHAMPTONSHIRE

NEWARK (PETERBOROUGH) SAND AND GRAVEL CO., LTD., 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and screened gravel and sand.

PETERBOROUGH QUARRIES, LTD., Sandylands, Market Deeping, Peterborough. (Tel.: Market Deeping 2355.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Maxey.

POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

STORTON, F. E., LTD., Weedon Road, Northampton. (Tel.: Northampton 3358.) Producers of washed gravel and sand to B.S.S.

NORTH WALES

CAWOOD, WHARTON AND CO., LTD., Pistyll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-yn-lal 27.) Crushed limestone and tarmac macadam, all grades.

CHESHIRE AND NORTH WALES TARRED MACADAM CO., LTD., Llanarmon, near Mold. (Tel.: Llanarmon-yn-lal 43.) Hard, broken limestone; dry and coated to B.S.S. Inquiries to Registered Office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 80894.)

ENSTON BROS., Llwyn Ifaf Quarry, Clynnogfawr, Caernarvon. (Tel.: Clynnogfawr 297/8.) An ideal crushed, washed natural sand and gravel. Highest quality. Precast concrete products, at our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2535/6.) Crushed granite ex our quarry, Pengwern and Gwydr Quarries, Ltd., Treffriw, Llanrwst, Denbighshire. (Llanrwst 38.)

PENMAENMAWR AND WELSH GRANITE CO., LTD., Quarries at Penmaenmawr (Tel.: 2256/8), and at Trevor (Tel.: Clynnogfawr 297/8). Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day; immediate delivery ex stock. Coated granite also available.

TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

NOTTINGHAMSHIRE

AIZLEWOOD, DOUGLAS E., Bow Bridge, Rotherham. (Tel.: Rotherham 2622.) Crushed and graded limestone, all grades of washed gravel and sands.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., Coalville, Leicestershire. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

GLEN QUARRIES, LTD., Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, plastering sand and crushed gravel; could be collected ex quarry or delivered.

GUNTHORPE QUARRIES (G.L.P.), LTD., (Tel.: Nottingham 351/2 and Works: London 2131.) An associate company of T. C. Campbell, Ltd. All grades washed gravel and sand to B.S.S.

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) Quarries at Hoveringham, Holme Pierrepont, Colwick, Bleasby and Newark. Other quarries throughout the country—delivered 21 conditions. All sizes and gradings of crushed stone and sand to any specification. Crushed quartzite for surface dressing of roads, a specialty. Combined plant capacity 20,000 tons per day.

NEWARK GRAVEL AND CONCRETE CO., LTD., Grove Street, New Bardon, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates.

NORTH NOTTS. GRAVEL CO., LTD., Bellmoor, Retford, Notts. (See Yorkshire.)

SALISBURY AND WOOD, LTD., Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

OXFORDSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 391/2.) Manufacturers and suppliers of all grades limestone, tarmacadam, dry, pitching stone, hardcore, etc.

CURTIS, AND SONS LTD., Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates. Pits at Radley, near Abingdon. (Tel.: Abingdon 441.)

DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, sets. (See London.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 509.) See Northamptonshire.

GRUNDON, S. (EWEMLYNE) LTD., Eweyne, Oxon. (Tel.: Eweyne 37.) London Office (Tel.: Uxbridge 3651/2/3/5.) All grades washed aggregates. Path hoggins, broken stone, building sand.

HAINES, H. (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone. Cotswold building and walling stone.

HALL AND CO., LTD., Caddington Road, Reading. (Tel.: 50458.)

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

NETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Roadstone, Costwold building and walling stone.

RADNORSHIRE

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 3014/.) (See details under Herefordshire.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) See Herefordshire for details.

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Tel.: Kington 421.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel.: 961), Salop.

RUTLAND

GIBBONS, F. B. AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO. (Prop. Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

PETERBOROUGH QUARRIES, LTD., Sandylands, Market Deeping, Peterborough. (Tel.: Market Deeping 2355.) Quarry at Gresham, all grades of broken stone and hardcore. (See also Northamptonshire.)

POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

SHROPSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 3014/.) (See details under Herefordshire.)

DORRINGTON SAND AND GRAVEL QUARRIES, LTD., Newt, Swinbrook. (Tel.: Dorrington 276.) Supplies of ready mixed concrete, building sand, washed sand, washed and crushed gravel.

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Kington. (Tel.: Kington 421.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel.: 961), Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.

SOMERSET

ASHAM QUARRY CO., LTD., Chantry, Frome. (Tel.: Nunney 351.) All sizes limestone block, broken and aggregates. Tared and bituminous macadam to B.S. 802 and 1621.

DANGERFIELD, F. J. AND CO., LTD., 216A Finchley Road, London, N.W.3. (Tel.: HAMpstead 8044/8.) For all road aggregates, kerbs, sets. (See London.)

HALL AND CO., LTD., Longmoor House, Ashton Vale Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.

NORTH WILTS. QUARRYING CO., Noble Street, Sherston, Wilts. (Tel.: Sherston 321—3 lines.)

WAINWRIGHT, JOHN, AND CO., LTD., Shepton Mallet. (Tel.: Shepton Mallet 2366/7.) All sizes basalt, coated basalt, concrete aggregates, filtering media, building blocks and slabs.

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ESK MANUFACTURING CO., LTD., Cumberland. (Tel.: Carlisle 2-4941.) (For details, see Cumb.)

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AMALGAMATED AGGREGATES, LTD., 97 Cowbridge Road East, Cardiff. (Tel.: Cardiff 25249.) All sizes crushed and graded aggregate, dry or washed. High calcium or dolomitic limestone, also all grades road stone. Quarries near Newport, Cardiff, Bridgend, Pontypridd.

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SESSIONS AND SONS, LTD., West Dock, Cardiff. Producers of coarse and fine aggregate, dredged and graded to British Standards. Branches Newport and Swansea. (Also Gloucester and Hereford.)

SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. (See Glos.)

SOUTH WALES SAND AND GRAVEL CO., LTD., Head Office: P.O. Box 8, Beaumaris Buildings, Swansea. (Tel.: Swansea 53071.) Sand and gravel merchants, builders' merchants, Pennant Quarry owners, slag, hardcore, ashes, filling, graded clinker filter media. Depots: Cardiff, Newport, Barry, Port Talbot, Briton Ferry, Swansea, Llanelli.

STAFFORDSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S. 802, all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.

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CROXDEN GRAVEL LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity 2,000 tons per day.

DUNNING AND SON LTD., Wood End Gravel Pits, Hedsor. (Tel.: Hedsor 302/325/251.) All grades of washed sand and gravel supplied to B.S.S.

HILTON GRAVEL LTD., Cheadle, Staffs. (Tel.: Tean 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent (Tel.: Burton 6061.)

HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Chaddes 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

KEVIN LIME LTD., Oakamoor, Staffs. (Tel.: Oakamoor 385-386.) Clean graded dry limestone, all to B.S.S. sizes. Output 1,000 tons per day

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STAFFORDSHIRE

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TERN HILL SAND AND GRAVEL CO., LTD., Almington, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, clinkers, ashes and hoggin.

TRENTHAM GRAVEL CO., LTD., Lordley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity 2,000 tons per day.

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HALL AND CO., LTD., West End Road, Ipswich. (Tel.: Ipswich 5593/4.) Pits at Kersey and Homersfield, near Hartest. Gravel, aggregates, concreting, plastering and building sand.

MACLAEN BROS. (KENNETT), LTD., Station Road, Kentford, Camb. (Kentford 333/4.) (See Cambs.)

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4, Coney Weston 12 and Halstead 2323.) Pits at St. Ives, Knettishall, near Thetford, and Gosfield, near Halstead.

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) (See Norfolk.)

WEBB, G., CAMBRIDGE, 35 Magrath Av., Cambridge. (Tel. 59966, 53969, 50353 (night).) (See Cambs.)

SURREY

COFF, HARRY A., LTD., Burkhill Hill, Cheapside, Ascot, Berks. (Tel. 1026/7.) (See Berkshire.)

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EASTWOOD SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2041.) Conglomerate Sand and Ballast, Pit Thorne, nr. Egham. (Tel.: Egham 3121.) Runfold Sand and Ballast, Pit, Runfold, nr. Farnham, Surrey. (Tel.: Runfold 2020.) Producers and distributors of all grades of washed aggregates.

HALL AND CO., LTD., Victoria Wharf, Croydon. (Tel.: Croydon 4444.) Other major depots at Coulsdon, Epsom, Mitcham, Orpington, Purley, Redhill, Tadworth and Woking. Pits at Send and Redhill. Gravel, aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.

HARRIS, M. P. AND CO., LTD., Kingston Road, Leatherhead, Surrey. (Tel.: 3497.)

JAMES AND CO., LTD., 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, bulldozing & bulk excavation. (Tel.: Slough 20361/2/3.)

LONDON BALLAST CO., LTD., (Tel.: Paddington 5064, 155A Porchester Terrace North, Paddington, W.2.)

MARCO (AGGREGATES), LTD., Pit, Norland Lane, Thorpe, near Egham. (Tel.: Chertsey 3401.) Producers and distributors of high-grade washed sand, shingle, ballast, etc.

MARCO (CROYDON), LTD., Hampton Road, West Croydon. (Tel.: THOrnton Heath 4236/7/8.) All building and road aggregates.

SURREY

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TWICKENHAM GRAVEL CO., LTD., Government Road, Ash Vale. (Tel. 2349.)

WELLS, A. L. AND SON, LTD., Builders' Merchants, Garlands Road, Leatherhead. (Tel. 3018/9.) Sand aggregates, hardcore, ashes, cement. Clinker block manufacturers.

WINTON W.M. R., LTD., Send, Woking. (Tel.: Ripley 2454/5.) All grades sand, shingle, ballast, hoggin and ashes. Clinker block manufacturers.

SUSSEX

AVANN, F., Cavendish Avenue, Eastbourne. (Tel. 4969/70.) Washed and graded ballast, sand, bricks, breeze and concrete blocks, hardcore, clinker, tarmac, etc., supplied.

HALL AND CO., LTD., 16 Chapel Road, Worthing. (Tel.: Worthing 7240.) Concrete, sand, ballast, Bexhill, Bognor, Crowborough, East Grinstead, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crumbles, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portslade. Have aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.

HARRIS, M. P. AND CO., LTD., West Station Goods Yard, Bexhill (Tel. 61), Cavendish Place, Eastbourne (Tel. 3800); Dominion Road, Worthing (Tel. 8822); Whitbread Lane, Northiam (Tel. 2211); Station Goods Yard, Haywards Heath (Tel. 3800); Chichester Road, Haywards Heath (Tel. 3366). The Hornet, Chichester. (Tel. 4181.) All grades aggregates, hardcore, clinker, ashes, etc.

WRIGHT, C. AND SONS (BTTON), LTD., 19 Bristol Gardens, Brighton, 7. (Tel.: Brighton 63357 and 62406.) All ballast, washed and crushed shingle, sand, ashes, hardcore, chalk, bricks, etc.

WARWICKSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 302.) Clean and graded dry limestone to B.S.S. all sizes, coated limestone to B.S.S. 802 and 1621, and wet-mix, large output; reliable deliveries.

DUNSTON STONE AND LIMESTONE, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)

HAINES, H. (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, brickings and broken stone. Cotswold building and paving stones.

HALL AND CO., LTD., 188 Lichfield Road, Four Oaks, Sutton Coldfield. (Tel.: Four Oaks 356.) Gravel, aggregates, concreting, plastering, building sand.

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottinghamshire. (Tel.: Nottingham 3171-15 lines.) (For details, see Nottinghamshire.)

JUDKINS, LTD., Granite Quarries, Tuttle Hill, Nuneaton. (Tel.: Nuneaton 3411-10 lines.) All sizes washed granite aggregate, tarred and bituminous macadam. Slab mix a specialty.

KEVIN LIME CO., LTD., Oakamoor, Staffs. (Tel.: Oakamoor 385/386.) Clean graded dry limestone to B.S.S. 802. Output 1,000 tons per day.

SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) Natural Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. (See Glos.)

SHIRE OAK GRAVELS, LTD., (See Staffordshire.)

WARDLOW LIMESTONE, LTD., Cauldon Low, N. Staffs. (Tel.: Oakamoor 366.) (For details, see Staffs.)

WARWICKSHIRE QUARRIES, LTD., Bedworth Road, Nuneaton. (Tel.: Coventry 67821.) Red shale, screened for roads, car parks, sports grounds, tennis courts, etc., attractive colour.

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BROOMBYS, LTD., Samside, Milnthorpe, Westmorland. (Tel.: Milnthorpe 3251/2.) All grades washed, crushed, gravel, sand, limestone, granite chippings, pitchings, vermiculite, tarmac, lime, etc.

ESK MANUFACTURING CO., LTD., Cumbria, Cumbland. (Tel.: Carlisle 2-4941.) (For details, see Cumb.)

WILTSHIRE

BULL BROS. S. AND L. LTD., 126A High Street, Wimborne. (Tel. 2264.) (See Hampshire.)

COKE, T. F. (CHERTSEY), LTD., Chertsey, Gloucester Road, Chertsey. (Tel. 4717/4874.) (See Glos.)

DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

WILTSHIRE

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

MORESBYS (WILLOWOOD), LTD., Willowood, Wimborne, Dorset. (Tel.: Willowood 234.) Concrete aggregates, building sand, hoggin, path gravel.

NORTH WILTS. QUARRYING CO., LTD., Noble Street, Sherston, Wilts. (Tel.: Sherston 521-3 lines.) Building and terrace walling stone, crazy paving and stone roofing tiles.

TAYMAC, LTD., Wootton Bassett, near Swindon, Wilts. (Tel.: Wootton Bassett 391-5 lines.) Cotswold stone, hardcore, washed and graded aggregates, building sand.

WORCESTERSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 302.) Clean and graded dry limestone to B.S.S. all sizes, coated limestone to B.S.S. 802 and 1621, and wet-mix; large output; reliable deliveries.

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 1014.) (See details under Herefordshire.)

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

KEVIN LIME CO., LTD., Oakamoor, Staffs. (Tel.: Oakamoor 385/386.) Clean graded dry limestone, all to B.S.S. sizes. Output 1,000 tons per day.

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Kington. (Tel. 421.) (See Herefordshire.)

SHAKEMANTLE QUARRY CO., LTD., Cinderford, Glos. (Tel.: Cinderford 3197.) "Doura" Facing, Engineering and Common Bricks in terra-cotta, red and golden brown. (See Glos.)

YORKSHIRE

AIZLEWOOD, DOUGLAS E., Bow Bridge, Rotherham. (Tel.: Rotherham 2622.) Crushed and graded limestone; all grades of washed gravel and sands.

DENNIFER, S. LTD., Kiveton Park, nr. Sheffield. (Tel.: Kiveton 4467/78.) Tracked and plain mixed concrete, washer and crushed gravel, concreting sand, bldg. sand, crushed and graded stone.

GLEN QUARRIES, LTD., Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, paving sand and crushed gravel; could be collected ex quarry or delivered.

HOVERINGHAM GRAVELS, LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

NORTHERN AGGREGATES CO., LTD., Bellmoor, Retford, Notts. (Tel.: Retford 2-19-3 lines.) Concrete aggregates and sand, quartzite chippings, building sand, etc. Quarries at Bellmoor and Lound, near Retford and Worksop. Mixed concrete plants at Retford and Worksop, Notts. Ossett, Yorks., and Wath-on-Dearne, Yorks. (See details, see Retford.)

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SLATER BROS. (WHITELEY), LTD., Whiteley Bridge, near Goole. (Tel.: Whiteley Bridge 300 and 316.) Washed and crushed gravel. Concreting sand, building sand, crushed and graded stone, natural white stone for crazy paving, facing walls & house building.

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WOMERSLEY GRADED STONE CO., LTD., Womersley Quarry, nr. Doncaster. (Tel.: Wentbridge 284.) Crushed and graded calcium carbonate limestone aggregates. Triple-screened, first-class products, high crushing strength, eminently suitable for concreting, tarring and road making. Prices and analysis on application. Quarry 2 miles from Darrington A.1.

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